

Non-Infringement MSJ (‘615 Patent, Claim 13)



Sonos, Inc. v. Google LLC.

Case: 6:20-cv-881

Sonos Accuses Google's YouTube and Google Play Music Applications

Phones Running YouTube Apps



Phones Running Google Play Music



'615 Patent

'615

United States Patent
Coburn, IV et al.

(10) Patent No.: **US 9,967,615 B2**
(45) Date of Patent: ***May 8, 2018**

(54) **NETWORKED MUSIC PLAYBACK**

(71) Applicant: **Sonos, Inc.**, Santa Barbara, CA (US)

(72) Inventors: **Arthur Coburn, IV**, Cambridge, MA (US); **Joni Hoadley**, Santa Barbara, CA (US)

(73) Assignee: **Sonos, Inc.**, Santa Barbara, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **14/628,952**

(22) Filed: **Feb. 23, 2015**

(65) **Prior Publication Data**
US 2015/0172756 A1 Jun. 18, 2015

Related U.S. Application Data

(63) Continuation of application No. 13/341,237, filed on Dec. 30, 2011, now Pat. No. 9,654,821.

(51) **Int. Cl.**
H04N 7/18 (2006.01)
H04N 21/436 (2011.01)
(Continued)

(52) **U.S. Cl.**
H04N 21/43615 (2013.01); **H04L 65/0084** (2013.01); **H04N 21/4387** (2013.01);
(Continued)

(58) **Field of Classification Search**
CPC H04N 21/43615; H04N 21/6581; H04N 21/439; H04N 21/6125; H04N 21/64322;
(Continued)

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(Continued)

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(Continued)

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(Continued)

Primary Examiner — Oshat Monyea
(74) *Attorney, Agent, or Firm* — McDonnell Boehnen Hulbert & Berghoff LLP
(57) **ABSTRACT**
Systems, methods, apparatus, and articles of manufacture to facilitate connection to a multimedia playback network are disclosed. An example method includes detecting a first input including an identification of a playback device; detecting a second input including an identification of an item on a controller, wherein multimedia content associated with the item is retrievable from a content provider; detecting a trigger, wherein the trigger is not the first input or the second input; and sending, in response to detecting the trigger, information regarding the multimedia content from the controller to the playback device, wherein the information includes an identification of the multimedia content for playback by the playback device, and wherein the information causes (a) the playback device to retrieve, independent of the controller, the multimedia content from the content provider and (b) playback of the retrieved multimedia content.

29 Claims, 11 Drawing Sheets

(54) **NETWORKED MUSIC PLAYBACK**

(71) Applicant: **Sonos, Inc**, Santa Barbara, CA (US)

(72) Inventors: **Arthur Coburn, IV**, Cambridge, MA (US); **Joni Hoadley**, Santa Barbara, CA (US)

(63) Continuation of application No. 13/341,237, filed on Dec. 30, 2011, now Pat. No. 9,654,821.

'615 Claims Directed At A "Local Playback Queue"

13. A tangible, non-transitory computer readable storage medium including instructions for execution by a processor, the instructions, when executed, cause a control device to implement a method comprising:

causing a graphical interface to display a control interface including one or more transport controls to control playback by the control device;

after connecting to a local area network via a network interface, identifying playback devices connected to the local area network;

causing the graphical interface to display a selectable option for transferring playback from the control device;

detecting a set of inputs to transfer playback from the control device to a particular playback device, wherein the set of inputs comprises: (i) a selection of the selectable option for transferring playback from the control device and (ii) a selection of the particular playback device from the identified playback devices connected to the local area network;

after detecting the set of inputs to transfer playback from the control device to the particular playback device, causing playback to be transferred from the control device to the particular playback device, wherein transferring playback from the control device to the particular playback device comprises:

(a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device, wherein adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service;

(b) causing playback at the control device to be stopped; and

(c) modifying the one or more transport controls of the control interface to control playback by the playback device; and

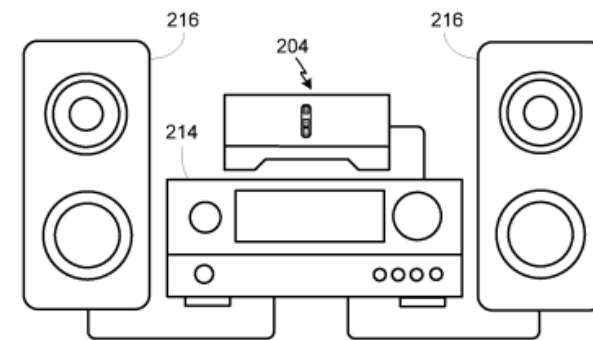
causing the particular playback device to play back the multimedia content, wherein the particular playback device playing back the multimedia content comprises the particular playback device retrieving the multimedia content from one or more second cloud servers of a streaming content service and playing back the retrieved multimedia content.

(a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device, wherein adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service;

'615 Patent at Claim 13

REQUIREMENTS

- 1) a **local playback queue** on the playback device
- 2) **adding resource locators** to the local playback queue that correspond to locations of the multimedia content



'615 Patent at Fig. 2C

Google Does Not Infringe Claim 13

1

Google uses a cloud queue—not a local playback queue

YouTube Does Not Infringe The '615 Patent



Google Does Not Infringe Claim 13

1

YouTube receivers do not store a local playback queue

Claim 13 Requires A Local Playback Queue On The Playback Device

13. A tangible, non-transitory computer readable storage medium including instructions for execution by a processor, the instructions, when executed, cause a control device to implement a method comprising:

causing a graphical interface to display a control interface including one or more transport controls to control playback by the control device;
after connecting to a local area network via a network interface, identifying playback devices connected to the local area network;
causing the graphical interface to display a selectable option for transferring playback from the control device;
detecting a set of inputs to transfer playback from the control device to a particular playback device, wherein the set of inputs comprises: (i) a selection of the selectable option for transferring playback from the control device and (ii) a selection of the particular playback device from the identified playback devices connected to the local area network;

after detecting the set of inputs to transfer playback from the control device to the particular playback device, causing playback to be transferred from the control device to the particular playback device, wherein transferring playback from the control device to the particular playback device comprises:

(a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device, wherein adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service;

(b) causing playback at the control device to be stopped; and

(c) modifying the one or more transport controls of the control interface to control playback by the playback device; and

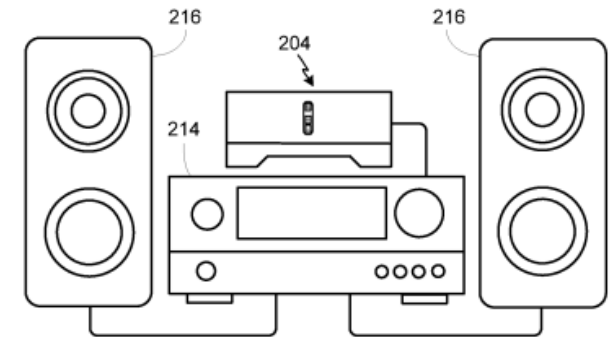
causing the particular playback device to play back the multimedia content, wherein the particular playback device playing back the multimedia content comprises the particular playback device retrieving the multimedia content from one or more second cloud servers of a streaming content service and playing back the retrieved multimedia content.

(a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device, wherein adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service;

'615 Patent at Claim 13

REQUIREMENTS

- 1) a **local playback queue** on the playback device



'615 Patent at Fig. 2C

Claim Construction: “Playback Queue”

"Playback Queue" Is An Ordered List Of Multimedia Items Selected By The User For Playback

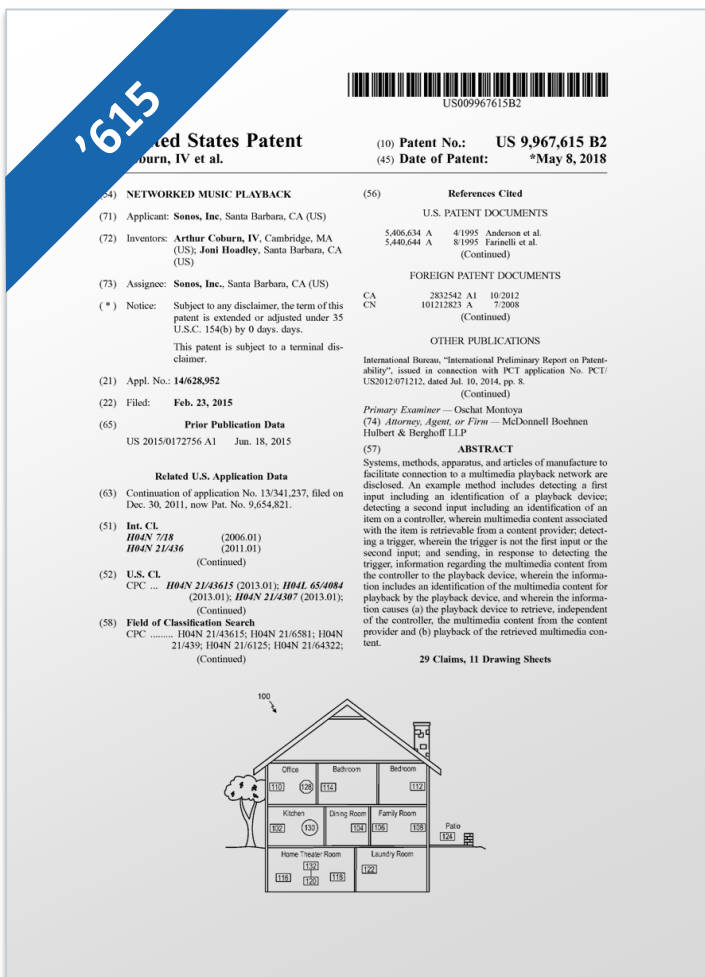
'615 Patent

| Google Construction | Sonos Construction |
|---|--|
| an ordered list of multimedia items that is selected by the user for playback | Plain meaning [<i>i.e.</i> , a data construct that can contain one or more resource locators] |

Dkt No. 126 (Joint Claim Construction Statement) at p 12

'615 Patent Uses "Playback Queue" Consistent With Google's Construction

"Playback Queue" Is Created And Edited Using Applications On The Controller



(e.g., Sonos™) system. Two-way communication helps enable features such as keeping a **local playback queue synchronized with a queue that the user is editing/managing in the third party application**; allow the third party application to know what is currently playing on the local playback system; allow integrated transport control between the third party application and the local playback system; and so on.

'615 Patent at 16:25-31

Certain embodiments provide queue management to allow a third party application to control a local playback queue. That is, the local playback system has a queue, but the third party application **allows users to add, delete and so on from the queue**, for example. Rather than switch from

'615 Patent at 16:53-57

Certain embodiments facilitate control of a local playback system from outside a household or other location at which the local playback network is configured. For example, **a user can queue up music** while away from his or her house.

'615 Patent at 17:12-15

A Collection Of Fixed Named Variables Is Not A Playback “Queue”

Bhattacharjee Declaration – Google’s Expert

A POSITA would not consider a fixed set of named variables to be a playback “queue.” For instance, Thomas H. Cormen’s book Introduction to Algorithms (available here) includes a chapter describing “Elementary Data Structures,” which describes “Queue.” **Chapter 10. The books disclose exemplary implementations of a Queue (e.g., an array or a linked list), each of which is a structure that can store items in a particular order.** **Id.** Tellingly, there is no example using a fixed set of named variables stored in memory.

Google Op. Br., Ex. 1 at ¶70

Chapter 10 Elementary Data Structures

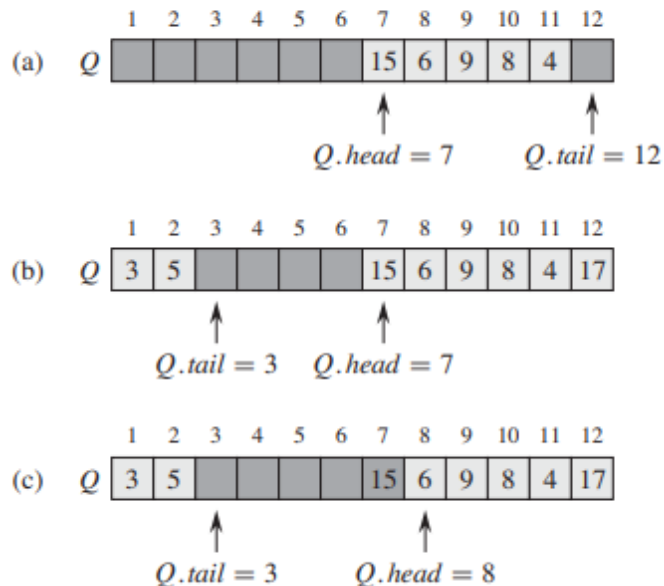
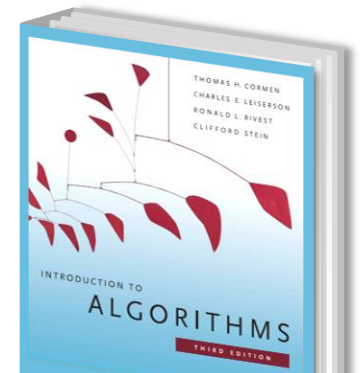
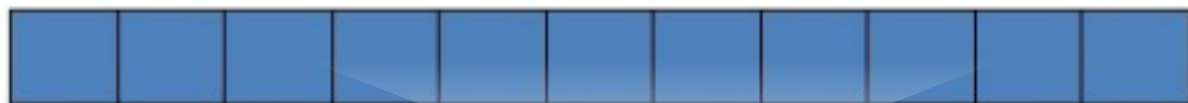


Figure 10.2 A queue implemented using an array $Q[1..12]$. Queue elements appear only in the lightly shaded positions. (a) The queue has 5 elements, in locations $Q[7..11]$. (b) The configuration of the queue after the calls $ENQUEUE(Q, 17)$, $ENQUEUE(Q, 3)$, and $ENQUEUE(Q, 5)$. (c) The configuration of the queue after the call $DEQUEUE(Q)$ returns the key value 15 formerly at the head of the queue. The new head has key 6.

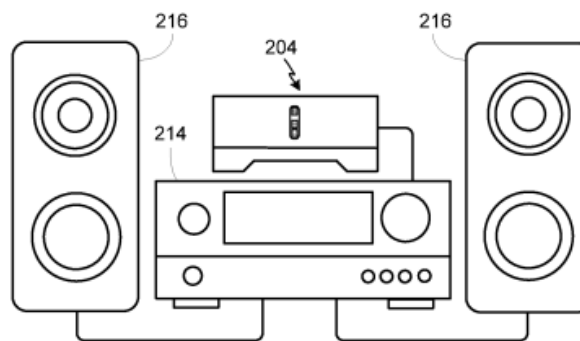


Thomas H. Cormen, Introduction to Algorithms

A Collection Of Fixed Named Variables Is Not A Playback “Queue”



Array



'615 Patent at Fig. 2C

Sonos Improperly Attempts To Eliminate The Requirement Of A Playback “Queue”

(a) causing one or more first cloud servers to add multimedia content to a **data construct** on the particular playback device wherein adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the **data construct**, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service;



Dr. Schmidt
(Sonos's Expert)

“In evaluating whether this element is satisfied, I applied the plain and ordinary meaning to the term ‘*local playback queue*’ in the context of the ‘615 Patent: **a data construct**[FN17] **on the playback device that can contain one or more resource locators** (e.g., videoids, URLs, or other resource locators), where each resource locator corresponds to multimedia content (e.g., a particular song or video) that the playback device is to playback.”

FN 17: “[A] **data construct** can take the form of a single data variable, multiple data variables, a data array, or other data structure.”

Sonos Opp. Br., Ex. 1 at ¶69.

Sonos' Interpretation Renders The Term "Queue" Meaningless

Almost any memory can store multimedia items, but memory is not a "queue"



“RCDI asks us to instead construe the term to mean ‘a component that enables communication between a user and a dispenser.’ ... **RCDI’s proposed construction reads out the term ‘interface’ in ‘user interface module.’** **Indeed, almost any component—for example, a processor, or even a power cord—can in its own way help to enable communication between a user and a dispenser. But processors and power cords are not interfaces.** Our interpretation gives proper meaning to the term interface by requiring the user interface module to be a component that the user interacts with to effectuate communication with the dispenser, not merely a component that enables such communication.”

Merck & Co., Inc. v. Teva Pharm. USA, Inc., 395 F.3d 1364, 1372 (Fed.Cir. 2005)

Sonos Admits In Its IPR Response A Queue Is Not “Just Any ‘Storage Area’ Of A Device”

In contrast, a POSA would have understood that just any “storage area” of a device for storing a “playlist” is not equivalent to the device’s “playback queue.” *Id.*, ¶82. Rather, a “playlist” is simply a collection of multimedia that could be stored in a “storage area” of a device and ***could be***, at some point in time, set for playback (it ***could be added*** to a “playback queue”). *Id.* However, a device with a stored “playlist” must be caused to add the “playlist” to a “playback queue,” thereby designating the contents of the “playlist” for playback. *Id.* In other words, a “playlist” standing alone, even when stored on a device, says nothing about what the device will actually playback. *Id.*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEALS BOARD

GOOGLE LLC,
Petitioner

v.

SONOS, INC.,
Patent Owner

U.S. Patent No. 9,967,615

Inter Partes Review Case No.: IPR2019-01001

PATENT OWNER RESPONSE
PETITION FOR *INTER PARTES* REVIEW
U.S. PATENT NO. 9,967,615

Pursuant to 37 CFR § 42.120(a), Patent Owner submits this
Owner Response to the petition.

Sonos’s IPR Response, Pg. 23-24

Sonos' Interpretation Renders The Term "Queue" Meaningless

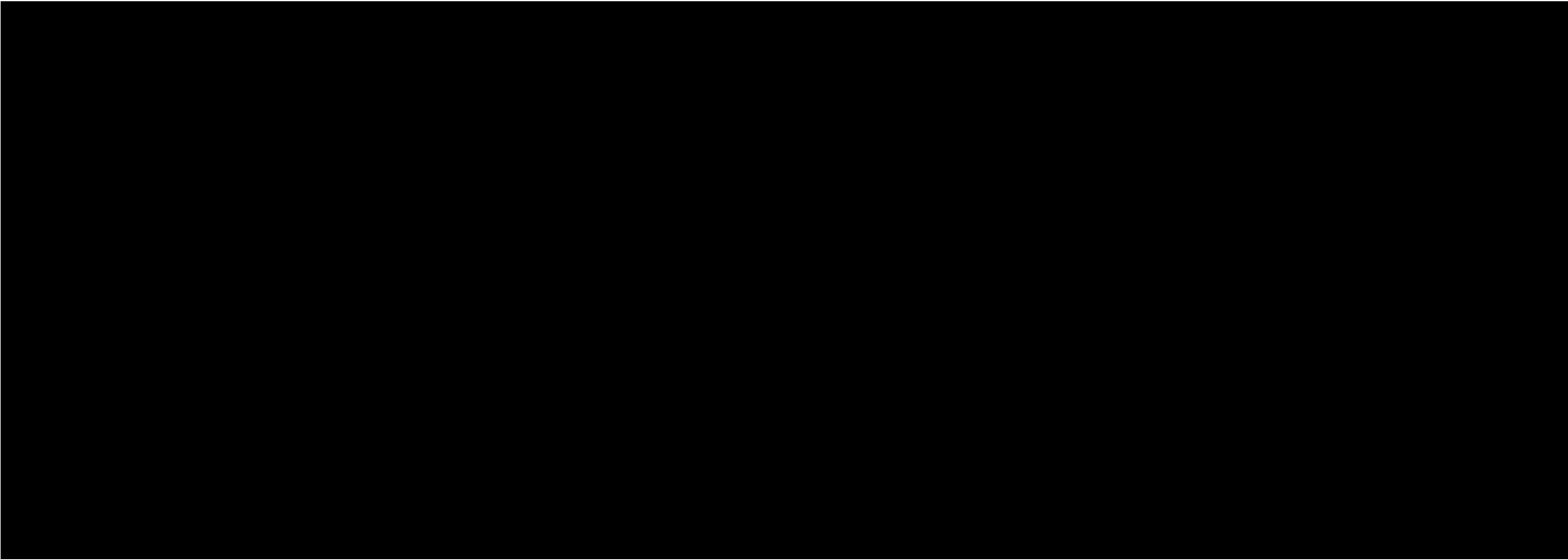


“A claim construction that gives meaning to all the terms of the claims is preferred over one that does not do so.”

Merck & Co., Inc. v. Teva Pharm. USA, Inc., 395 F.3d 1364, 1372 (Fed.Cir. 2005)

Non-Infringement: Google Does Not Have A Local Playback Queue

Google Uses A Cloud Queue—Not A “Local Playback Queue”



Schmidt Declaration – Sonos’s Expert



Dr. Schmidt
Sonos’s Expert

UNDISPUTED

Google Does Not Infringe Claim 13

1

YouTube receivers do not store a local playback queue

YouTube Does Not Add The Claimed Items To The Local Playback Queue

13. A tangible, non-transitory computer readable storage medium including instructions for execution by a processor, the instructions, when executed, cause a control device to implement a method comprising:

causing a graphical interface to display a control interface including one or more transport controls to control playback by the control device;

after connecting to a local area network via a network interface, identifying playback devices connected to the local area network;

causing the graphical interface to display a selectable option for transferring playback from the control device;

detecting a set of inputs to transfer playback from the control device to a particular playback device, wherein the set of inputs comprises: (i) a selection of the selectable option for transferring playback from the control device and (ii) a selection of the particular playback device from the identified playback devices connected to the local area network;

after detecting the set of inputs to transfer playback from the control device to the particular playback device, causing playback to be transferred from the control device to the particular playback device, wherein transferring playback from the control device to the particular playback device comprises:

(a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device, wherein adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service;

(b) causing playback at the control device to be stopped; and

(c) modifying the one or more transport controls of the control interface to control playback by the playback device; and

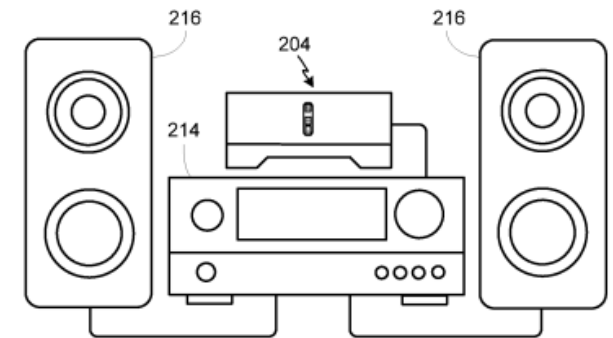
causing the particular playback device to play back the multimedia content, wherein the particular playback device playing back the multimedia content comprises the particular playback device retrieving the multimedia content from one or more second cloud servers of a streaming content service and playing back the retrieved multimedia content.

(a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device, wherein adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service;

'615 Patent at Claim 13

REQUIREMENTS

- 1) a local playback queue on the playback device
- 2) **adding resource locators** to the local playback queue that correspond to locations of the multimedia content



'615 Patent at Fig. 2C

Claim Construction: “Resource Locator”

'615 Patents

| Google Construction | Sonos Construction |
|--|--|
| An address of a resource on the Internet | Plain meaning (<i>i.e.</i> , an identifier) |

Dkt No. 126 (Joint Claim Construction Statement), p 15

Case 3:20-cv-06754-WHA Document 321-4 Filed 08/15/22 Page 50 of 212

Claim Language Supports Google's Construction

(a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device, wherein adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service;

'615 Patent at Claim 13

Kyriakakis Declaration – Google's Expert

A POSITA would understand that **the location of a resource on the Internet (such as the multimedia content on the cloud servers) are given by a Uniform Resource Locator**. See e.g., Microsoft Computer Dictionary, Fifth Edition (2002) (defining URL as “[a]n address for a resource on the Internet. URLs are used by Web browsers to locate Internet resources.”). (Ex. H, GOOG-SONOSNDCA-00056878 at 83)

Claims identify a “resource locator” as something different than an “identifier”

13. A tangible, non-transitory computer readable storage medium including instructions for execution by a processor, the instructions, when executed, cause a control device to implement a method comprising:

* * *

- (a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device, wherein adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service;

'615 Patent Claim 13

20. The tangible, non-transitory computer readable medium of claim 13, wherein causing the one or more first cloud servers to add multimedia content to the local playback queue on the particular playback device comprises causing an identifier of the multimedia content to be added to the local playback queue, wherein the identifier indicates a particular source of the multimedia content at the one or more second cloud servers of the streaming content service, wherein the particular playback device receives the multimedia content from the particular source at the one or more second cloud servers of the streaming content service.

'615 Patent Claim 20

Kyriakakis Declaration – Google's Expert

“The term ‘resource locator’ appears in the ‘615 Patent specification only as part of the larger phrase ‘uniform resource locator (URL),’ which the patent describes as ‘specif[ying] an address’ to an audio track in the cloud.”

Dkt 184 (Google Opp. CC Brief), Ex. 7, Kyriakakis Decl. ¶61

net) via the bridging device. For example, zone player 602 may contain a uniform resource locator (URL) that specifies an address to a particular audio track in the cloud. Using the URL, the zone player 602 may retrieve the audio track from the cloud, and ultimately play the audio out of one or more zone players.

'615 Patent at 11:45-12:3

nected to the household playback system. A uniform resource indicator (URI) (e.g., a uniform resource locator (URL)) can be passed to a playback device to fetch content from a cloud and/or other networked source, for example. A playback device, such as a zone player, can fetch content on its own without use of a controller, for example. Once the zone player has a URL (or some other identification or address) for a song and/or playlist, the zone player can run on its own to fetch the content. Songs and/or other multi-

'615 Patent at 12:44-67

“Resource Locator” Is Synonymous With “Uniform Resource Locator”

Kyriakakis Declaration – Google’s Expert

- **Term “resource locator” is shorthand for a “uniform resource locator”**
- **Technical dictionaries define “resource locator” only as part of the phrase “uniform resource locator”**

Dkt 184 (Google Opp. CC Brief), Ex. 7, Kyriakakis Decl. ¶157

Non-Infringement: Google Does Not Add Resource Locators To A Playback Queue

Google Play Music Does Not Infringe The '615 Patent



Google Play
Music

YouTube Does Not Infringe Under DoE

Sonos' Local Playback Queue DoE Argument Is Barred By Estoppel

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Attorney Docket No. 11-1001-CON0115 (MBHB 14-1795-US3))

In the Application of:)
Arthur Coburn IV) Examiner: Oschta Montoya
Application No.: 14/628,952) Group Art Unit: 2421
Filing Date: Feb. 23, 2015) Confirmation No.: 6897
For: Networked Music Playback)
Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313

RESPONSE TO NON-FINAL OFFICE ACTION MAILED JULY 25, 2016

Responsive to the Non-Final Office Action mailed July 25, 2016, Applicant respectfully requests reconsideration of the application in view of the following remarks. Applicant generally authorizes the Office to charge any underpayment or credit any overpayment to Deposit Account No. 13-2490 and to treat this or any subsequent communication that requires an extension of time as incorporating a request for such an extension.

Amendments to the Claims begin on page 2.

Remarks begin on page 14.

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1

SONOS-SVG2-00005288

“local playback queue” limitation was a narrowing amendment made to overcome the prior art

after detecting the set of inputs to transfer playback from the control device to the particular playback device, causing playback to be transferred from the control device to the particular playback device, wherein transferring playback from the control device to the particular playback device comprises:

(a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device,

(b) causing playback at the control device to be stopped, and

(c) modifying the one or more transport controls of the control interface to control playback by the playback device; and

‘615 File History, Office Action Response,
SONOS-SVG2-00004216 at 5288-9

Sonos' Resource Locator DoE Argument Is Barred By Estoppel

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Application/Control Number: 14/628,952
Art Unit: 2421

Page 2

DETAILED ACTION

The present application is being examined under the pre-AIA first to invent provisions.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/18/2016 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of new ground(s) of rejection.

Note to applicant: please refer to the guidelines below when presenting amendments to the claims, changes to the claims should be done to the previous set of claims, not to any set of claims the applicant wishes to present, and they should be clearly marked in order to avoid confusion.

(c) *Claims*: Amendments to a claim must be made by rewriting the entire claim with all changes (e.g., additions and deletions) as indicated in this subsection, except when the claim is being canceled. Each amendment document that includes a change to an existing claim, cancellation of an existing claim or addition of a new claim, must include a complete listing of all claims ever presented, including the text of all pending and withdrawn claims, in the application. The claim listing, including the text of the claims, in the amendment document will serve to replace all prior versions of the claims, in the application. In the claim listing, the status of every claim must be indicated after its claim number by using one of the following identifiers in a parenthetical expression: (Original), (Currently amended), (Canceled), (Withdrawn), (Previously presented), (New), and (Not entered).

(1) *Claim listing*: All of the claims presented in a claim listing shall be presented in ascending numerical order. Consecutive claims having the same status of "canceled" or "not entered" may be aggregated into one statement (e.g., Claims 1-5 (canceled)). The claim listing shall commence on a separate sheet of the amendment document and the sheet(s) that contain the text of any part of the claims shall not contain any other part of the amendment.

(2) *When claim text with markings is required*: All claims being currently amended in an amendment paper shall be presented in the claim listing, indicate a status of "currently amended," and be submitted with markings to indicate the changes that have been made relative to the immediate prior version of the claims. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed

“resource locator” limitation was a narrowing amendment made to overcome the prior art

(a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device, wherein adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service;

Festo Presumption Applies And Bars Sonos's Equivalents Arguments



“The patentee, as the author of the claim language, may be expected to draft claims encompassing readily known equivalents. **A patentee's decision to narrow his claims through amendment may be presumed to be a general disclaimer of the territory between the original claim and the amended claim**.... When the patentee has chosen to narrow a claim, courts may presume the amended text was composed with awareness of this rule and that the territory surrendered is not an equivalent of the territory claimed.... **the patentee still might rebut the presumption that estoppel bars a claim of equivalence. The patentee must show that at the time of the amendment one skilled in the art could not reasonably be expected to have drafted a claim that would have literally encompassed the alleged equivalent.**

Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 741 (2002)

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Sonos Fails To Rebut The *Festo* Presumption



“We disagree with Millipore and conclude that it was unnecessary for the district court to perform a doctrine of equivalents analysis because prosecution history estoppel bars Millipore's arguments.... These amendments were added to overcome a previous rejection. And to the extent this statement is ambiguous, we note that the Supreme Court has stated **‘[w]here no explanation is established ... the court should presume that the patent applicant had a substantial reason related to patentability for including the limiting element added by amendment.’”**

EMD Millipore Corp. v. AllPure Tech., Inc., 768 F.3d 1196, 1203 (Fed. Cir. 2014)

Sonos' Conclusory DoE Arguments Fails To Raise A Genuine Issue Of Material Fact



“Moreover, conclusory statements regarding equivalence are not enough to warrant a remand on that issue, as they do not raise any genuine issues of material fact.”

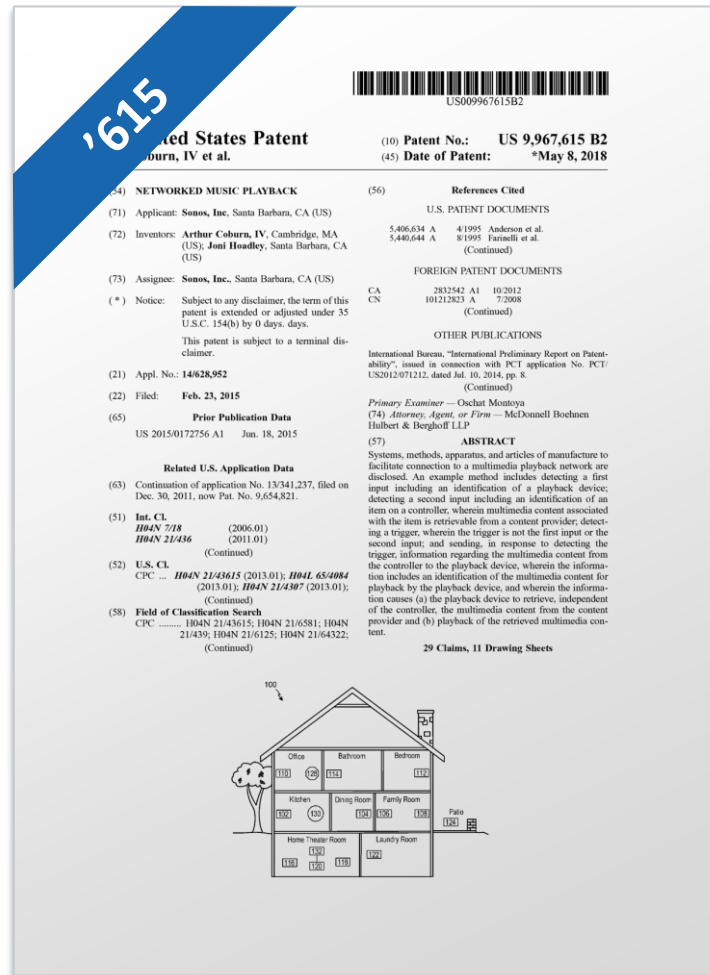
PC Connector Solutions LLC v. SmartDisk Corp., 406 F.3d 1359, 1364 (Fed. Cir. 2005)

Invalidity MSJ (’615 Patent, Claim 13)



July 13, 2022
Google, LLC v. Sonos, Inc.
Case: 2:20-cv-06754

'615 Patent: "Local Playback Queue"



(54) **NETWORKED MUSIC PLAYBACK**

(71) Applicant: **Sonos, Inc**, Santa Barbara, CA (US)

(72) Inventors: **Arthur Coburn, IV**, Cambridge, MA (US); **Joni Hoadley**, Santa Barbara, CA (US)

(63) Continuation of application No. 13/341,237, filed on Dec. 30, 2011, now Pat. No. 9,654,821.

Claim 13 Of The '615 Patent

CLAIM 13

| | |
|---|--|
| 13[pre]. A tangible, non-transitory computer readable storage medium including instructions for execution by a processor, the instructions, when executed, cause a control device to implement a method comprising: | |
| 13.1 causing a graphical interface to display a control interface including one or more transport controls to control playback by the control device; | |
| 13.2 after connecting to a local area network via a network interface, identifying playback devices connected to the local area network; | |
| 13.3 causing the graphical interface to display a selectable option for transferring playback from the control device; | |
| 13.4 detecting a set of inputs to transfer playback from the control device to a particular playback device, wherein the set of inputs comprises: (i) a selection of the selectable option for transferring playback from the control device and (ii) a selection of the particular playback device from the identified playback devices connected to the local area network: | |
| 13.5 after detecting the set of inputs to transfer playback from the control device to the particular playback device, causing playback to be transferred from the control device to the particular playback device, wherein transferring playback from the control device to the particular playback device comprises: | |
| (a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device, wherein adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service; | |
| (b) causing playback at the control device to be stopped; and | |
| (c) modifying the one or more transport controls of the control interface to control playback by the playback device; and | |
| 13.6 causing the particular playback device to play back the multimedia content, wherein the particular playback device playing back the multimedia content comprises the particular playback device retrieving the multimedia content from one or more second cloud servers of a streaming content service and playing back the retrieved multimedia content. | |

YouTube Remote Was Released on November 9, 2010

Google submitted un rebutted testimony from Google engineers that worked on the YouTube Remote

Prior Art YouTube Remote System

GOOG-SONOS-WDTX-INV-00015101

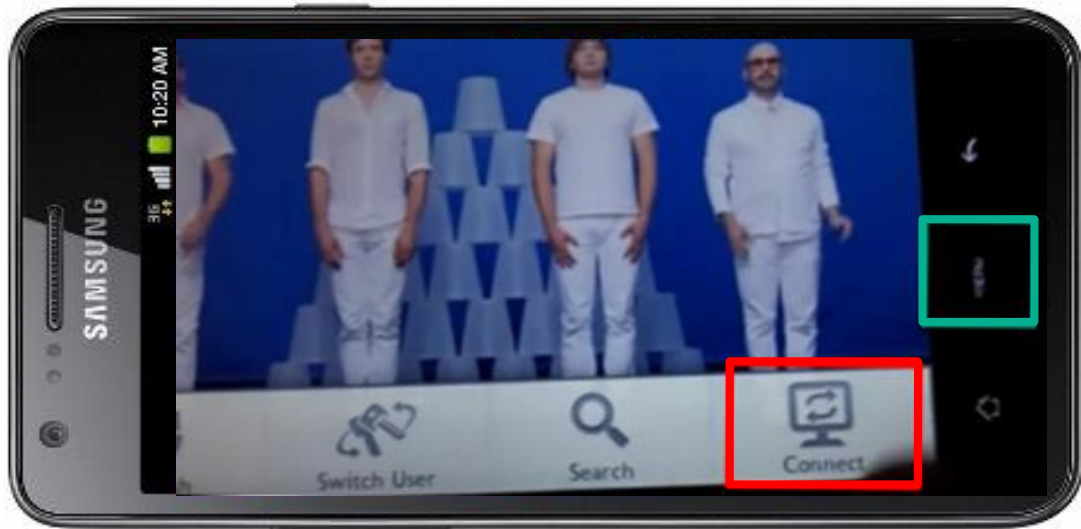


<https://www.youtube.com/watch?v=EGdsOslqG2s> (Video Uploaded 11/14/2010)

Google MSJ Op. Br., Ex. 1 at ¶124

Prior Art YouTube Remote System

Control Device



Playback Device



Prior Art YouTube Patent

(12) **United States Patent**
Danciu et al.

(10) Patent No.: **US 9,490,998 B1**
(45) Date of Patent: **Nov. 8, 2016**

(54) **NETWORK-BASED REMOTE CONTROL**

(75) Inventors: **Daniel Danciu**, Zurich (CH); **Yaniv Bernstein**, Zurich (CH); **Ramona Bobohalma**, Adliswil (CH); **Oliver Heckmann**, Bach (CH); **Jasmine Langridge**, Zurich (CH); **Alin Sinpalean**, Zurich (CH)

(73) Assignee: **Google Inc.**, Mountain View, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1041 days.

(21) Appl. No.: **13/041,964**

(22) Filed: **Mar. 7, 2011**

Related U.S. Application Data
(60) Provisional application No. 61/411,386, filed on Nov. 8, 2010.

(51) Int. Cl. **G06F 15/177** (2006.01)
H04L 12/28 (2006.01)
H04L 29/12 (2006.01)
(52) U.S. Cl. **CPC** **H04L 12/2818** (2013.01); **H04L 29/1231** (2013.01)

(58) **Field of Classification Search**
USPC 340/12.22, 12.23
See application file for complete search history.

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709/220

18 Claims, 7 Drawing Sheets



US009490998B1

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"iTunes the all-new Remote: Put your iPhone, iPad, or iPod touch in charge of the show," [online]. Apple Inc., 2011. First accessed on Sep. 14, 2010. Retrieved from the Internet: <http://www.apple.com/itunes/remotes> (4 pgs.).
(Continued)

Primary Examiner—Jennifer Mahmood
Assistant Examiner—Yong Heng Jiang
(74) Attorney, Agent, or Firm—Shumaker & Sieffert, P.A.

(57) **ABSTRACT**

The subject matter of the present disclosure can be implemented in, among other things, a computer-readable storage medium encoded with instructions for causing a programmable processor to receive, by a server, a first message from a remote control that is distinct from and external to the server, wherein the first message includes a remote control identifier and control information for controlling one or more functions of at least one device other than the remote control. The instructions also cause the programmable processor to retrieve, by the server, a controlled device identifier that uniquely identifies a controlled device that is distinct from and external to the server. The instructions also cause the programmable processor to send a second message from the server to the controlled device identified by the controlled device identifier to control an operation of the controlled device.

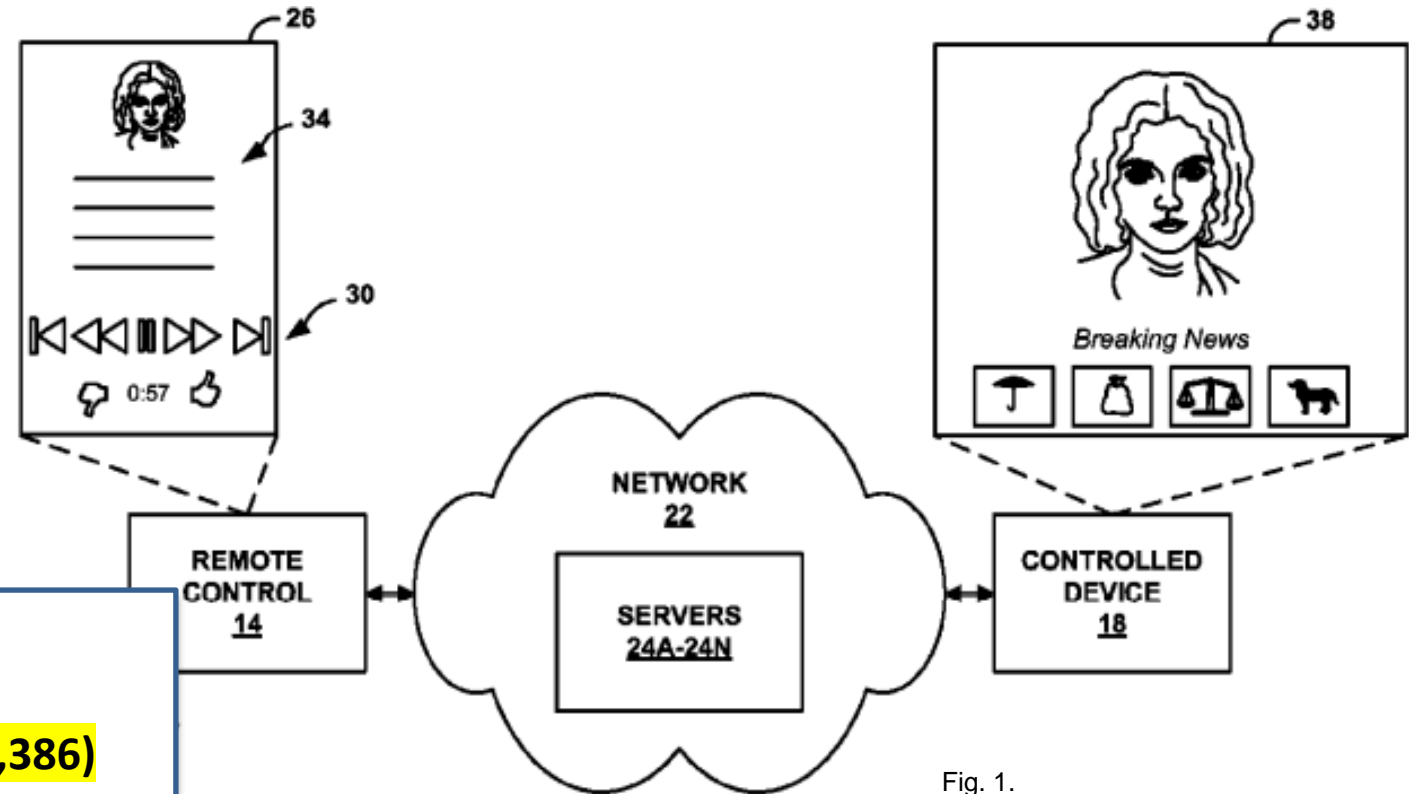


Fig. 1.




Filing date: **March 7, 2011**

Priority date: **Nov 8, 2010 (Prov 61/411,386)**

Inventors: **Daniel Danciu, Yaniv Bernstein, Ramona Bobohalma, Oliver Heckmann, Jasmine Langridge, Alin Sinpalean.**




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Claim 13 Of The '615 Patent Is Invalid

| CLAIM 13 | |
|---|---|
| 13[pre]. A tangible, non-transitory computer readable storage medium including instructions for execution by a processor, the instructions, when executed, cause a control device to implement a method comprising: |  |
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| 13.2 after connecting to a local area network via a network interface, identifying playback devices connected to the local area network; | |
| 13.3 causing the graphical interface to display a selectable option for transferring playback from the control device; |  |
| 13.4 detecting a set of inputs to transfer playback from the control device to a particular playback device, wherein the set of inputs comprises: (i) a selection of the selectable option for transferring playback from the control device and (ii) a selection of the particular playback device from the identified playback devices connected to the local area network: | |
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| (a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device, wherein adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service; | |
| (b) causing playback at the control device to be stopped; and | |
| (c) modifying the one or more transport controls of the control interface to control playback by the playback device; and | |
| 13.6 causing the particular playback device to play back the multimedia content, wherein the particular playback device playing back the multimedia content comprises the particular playback device retrieving the multimedia content from one or more second cloud servers of a streaming content service and playing back the retrieved multimedia content. | |

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| (b) causing playback at the control device to be stopped; and | |
| (c) modifying the one or more transport controls of the control interface to control playback by the playback device; and | |
| 13.6 causing the particular playback device to play back the multimedia content, wherein the particular playback device playing back the multimedia content comprises the particular playback device retrieving the multimedia content from one or more second cloud servers of a streaming content service and playing back the retrieved multimedia content. | |

Limitation 13.2 Is Disclosed By YouTube Remote

Google submitted prior art video showing phone and identified screen on the same wi-fi



See <https://youtube/EGdsOslqG2s?t=56> ("YTR Video")

Google MSJ Op. Br., Ex. 1 at ¶124

1. "Make sure you are both on the same Wi-Fi"
2. Sends video from Wi-Fi-connected phone to Wi-Fi connected TV
3. Controls video on TV with the YTR application

Google MSJ Reply Br., at pp 9-10

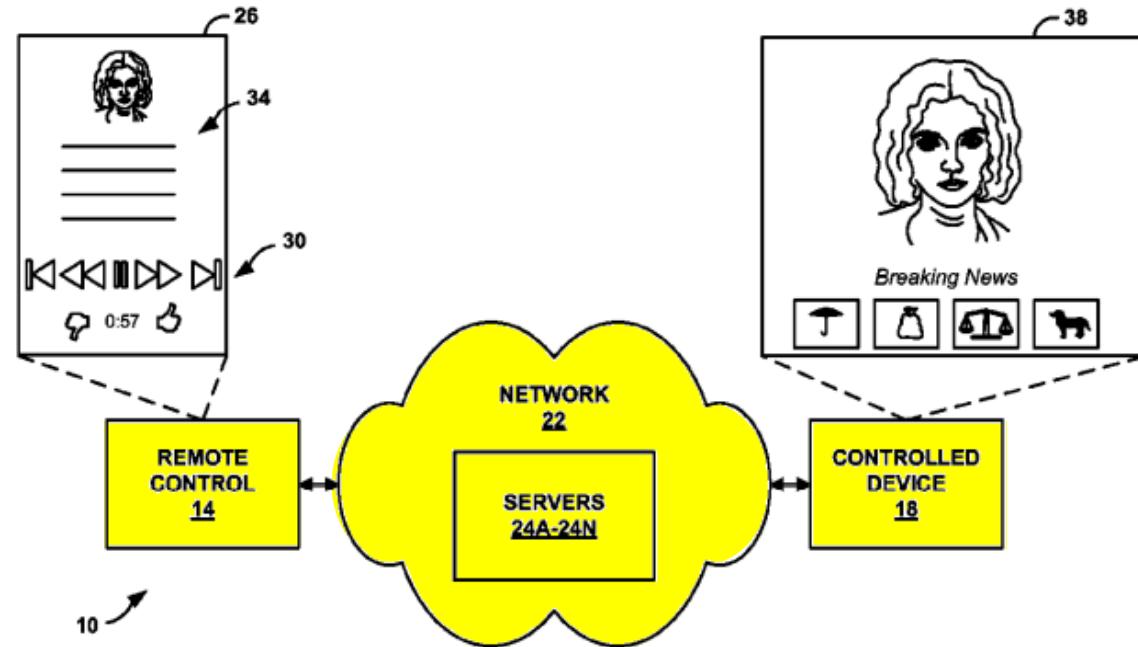
Limitation 13.2 Is Disclosed By The YouTube Remote Patent

Remote controls **62** and controlled devices **64** may be paired using a variety of techniques. In some examples,

'998 Patent at 8:11-12

"**network 22**" may be "a packet-based network, such as a local area network, a wide-area network, or a global network such as the Internet."

'998 Patent at 6:14-33.



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Limitation 13.2 Is Disclosed By Apple Airplay

Apple AirPlay







Google MSJ Op. Br., Ex. 1 at ¶ 30,
GOOG-SONOS-WDTX-INV-00000569

- Undisputed that Airplay discloses this limitation
- Both widely available and oft-compared products that did essentially the same thing—sending video from a mobile device to a TV

Google MSJ Reply Br., at pp 10-11

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Claim 13 Of The '615 Patent Is Invalid

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| 13.4 detecting a set of inputs to transfer playback from the control device to a particular playback device, wherein the set of inputs comprises: (i) a selection of the selectable option for transferring playback from the control device and (ii) a selection of the particular playback device from the identified playback devices connected to the local area network: | |
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Limitation 13.4 Is Disclosed By YouTube Remote



Menu button brings up a **“Connect” button** that is selected to transfer playback to one or more playback devices

Google MSJ Op. Br., Ex. 1 at ¶159 (GOOG-SONOS-WDTX-INV-00015101)

Limitation 13.4 Is Disclosed By The YouTube Remote Patent

YTR Patent

Remote controls **62** and controlled devices **64** may be paired using a variety of techniques. In some examples,

'998 Patent at 8:11-12

in FIG. 1. In some examples, the user may also utilize the remote control application of remote control **75** to select one or more previously paired controlled devices, and to send control messages to one or more paired controlled devices. For example, the user may interact with user interface **84** and/or display **88** to interact with and control any available controlled devices.

'998 Patent at 10:62-11:6

Google MSJ Op. Br., Ex. 1 at ¶169



Google MSJ Op. Br., Ex. 1 at ¶170, Ex. 14 (WayBack Capture)
GOOG-SONOS-NDCA-00108095 at 114

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Limitation 13.4 Is Disclosed By Apple Airplay

- Apple AirPlay Allowed User To Select A Playback Device For Transferring Playback Using A Device-Picker Screen



Google MSJ Op. Br., Ex. 1 at ¶130

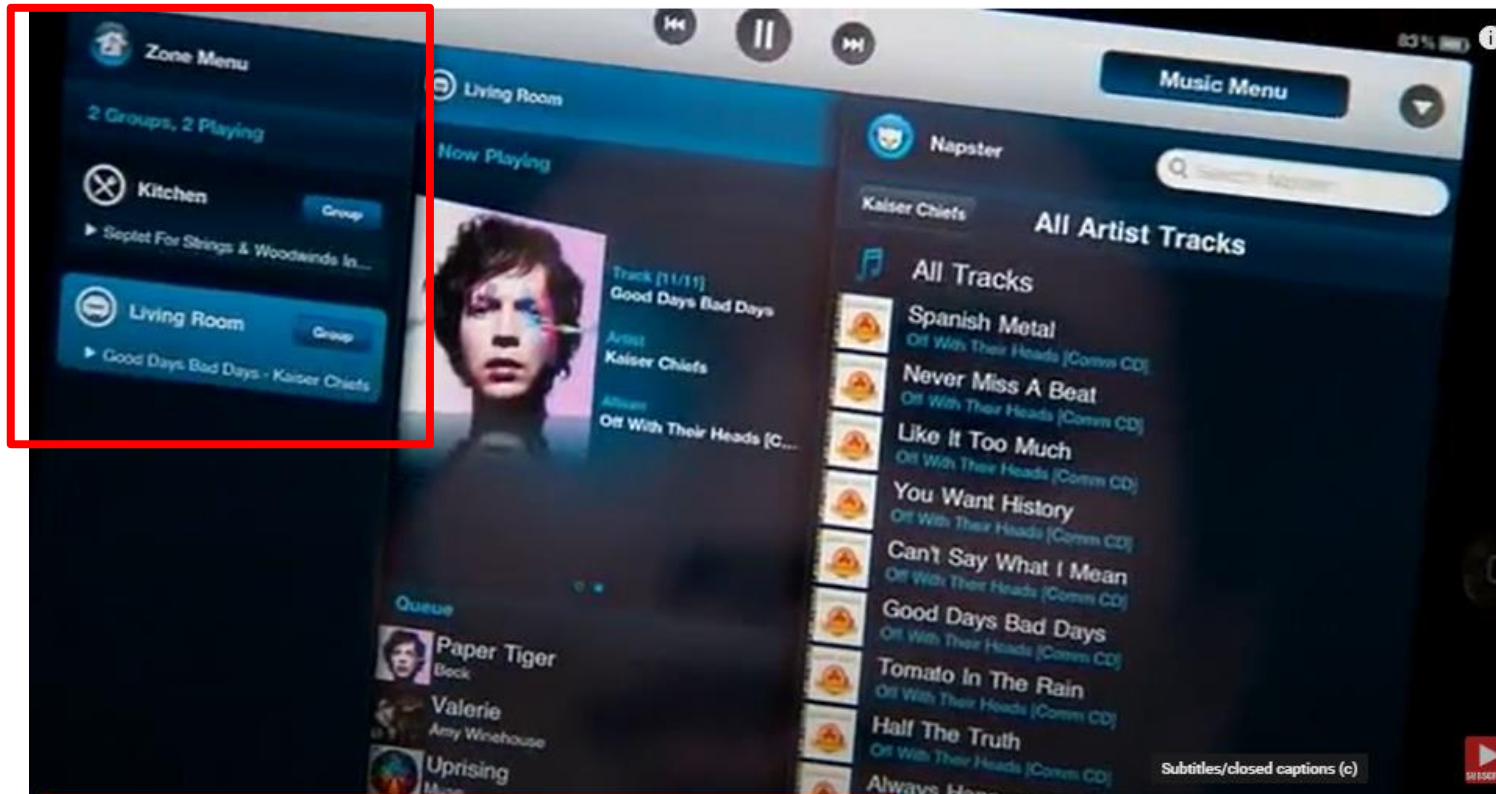
GOOG-SONOS-WDTX-INV-00000569 (Hidden Secrets of Airplay, 11/23/2010)

(image annotated above to add red and purple boxes).

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Limitation 13.4 Is Disclosed By Sonos Prior Art

- Sonos Prior Art Products Also Allowed A User To Select A Speaker Or Group Of Speakers (E.g., Kitchen Or Living Room) For Transferring Playback Using A Device-Picker Screen



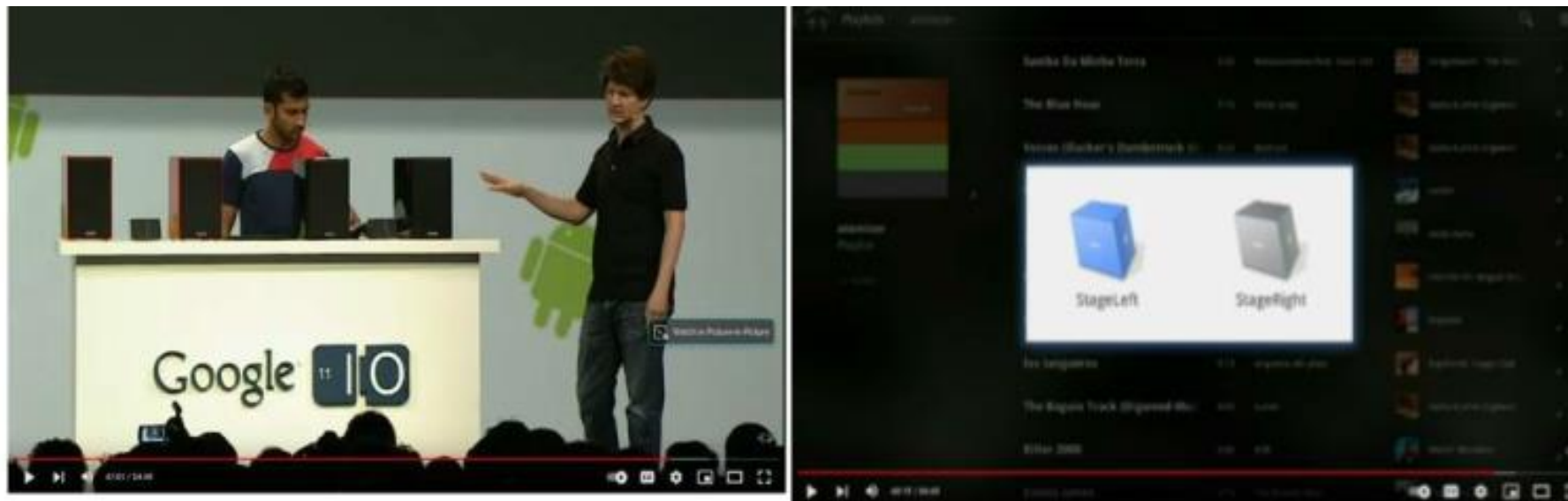
Sonos Video (https://www.youtube.com/watch?v=aCWcl_f_uS0) at 0:57
(uploaded, June 22, 2010)

Google MSJ Op. Br., Ex. 1 at ¶34
GOOG-SONOS-WDTX-INV-00015077

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Limitation 13.4 Is Disclosed By Project Tungsten

- May 2011 Google I/O Unveiled “Project Tungsten” Which Allowed Users To Select A Speaker (StageLeft Or StageRight) For Transferring Playback Using A Device-Picker Screen



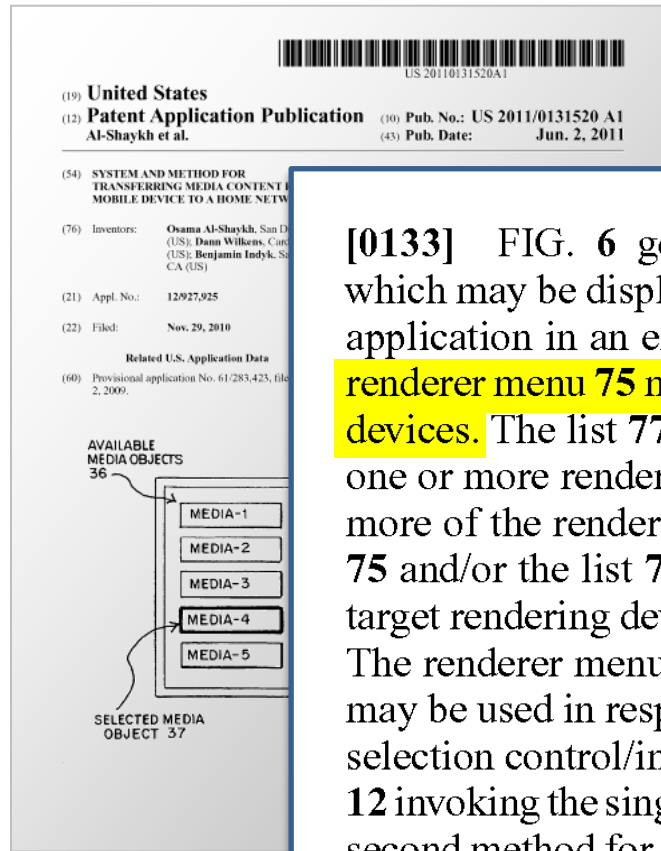
“When Anand tapped on those buttons [on the tablet], the music stream was sent transparently from one box to another. Since the boxes are running Android, they just pull the music directly from the music library in the cloud.”

Google MSJ Op. Br., Ex. 1 at ¶28
(GOOG-SONOS-WDTX-INV-00015090) at 47:01 (left) and 48:19 (right)

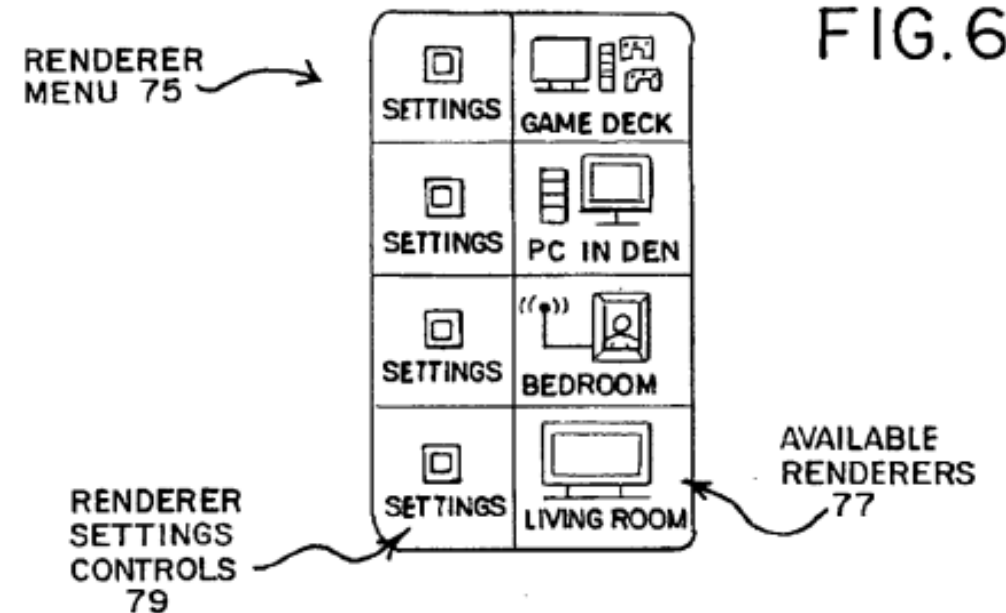
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Limitation 13.4 Is Disclosed By Al-Shayk

- **Renderer Menu 75 (Device-Picker) Allowed For Selection Of A Particular Playback Device**



[0133] FIG. 6 generally illustrates a renderer menu 75 which may be displayed in the user interface 31 of the media application in an embodiment of the present invention. The renderer menu 75 may display a list 77 of available rendering devices. The list 77 of available rendering devices may have one or more rendering devices, such as, for example, one or more of the rendering devices 21,22,23. The renderer menu 75 and/or the list 77 may enable the user 12 to select a new target rendering device from the available rendering devices. The renderer menu 75 may appear, may be accessed and/or may be used in response to the user 12 invoking the renderer selection control/indication 53 and/or in response to the user 12 invoking the single control/indication element 71 using the second method for invoking the single control/indication element 71.



Device-Picker Was Also A Well-Known Feature In Many Prior Art References

Device-Pickers were disclosed in various prior art systems and patents

YTR Patent



'998 Patent at 10:62-11:6

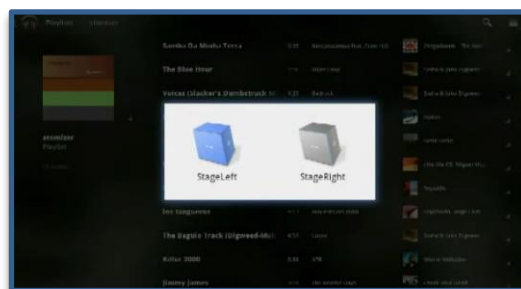
Google MSJ Op. Br., Ex. 1 at ¶169

Apple AirPlay



Google MSJ Op. Br., Ex. 1 at ¶30, Ex. 12
GOOG-SONOS-WDTX-INV-00000569

Google Tungsten



Google MSJ Op. Br., Ex. 1 at ¶28
GOOG-SONOS-WDTX-INV-00015090

Sonos Prior Art



Sonos Video (https://www.youtube.com/watch?v=aCWcl_f_u50) at 0:57 (uploaded, June 22, 2010)

Google MSJ Op. Br., Ex. 1 at ¶34
GOOG-SONOS-WDTX-INV-00015077

Al-Shayk

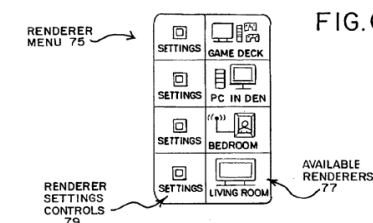
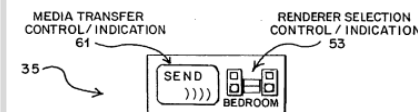
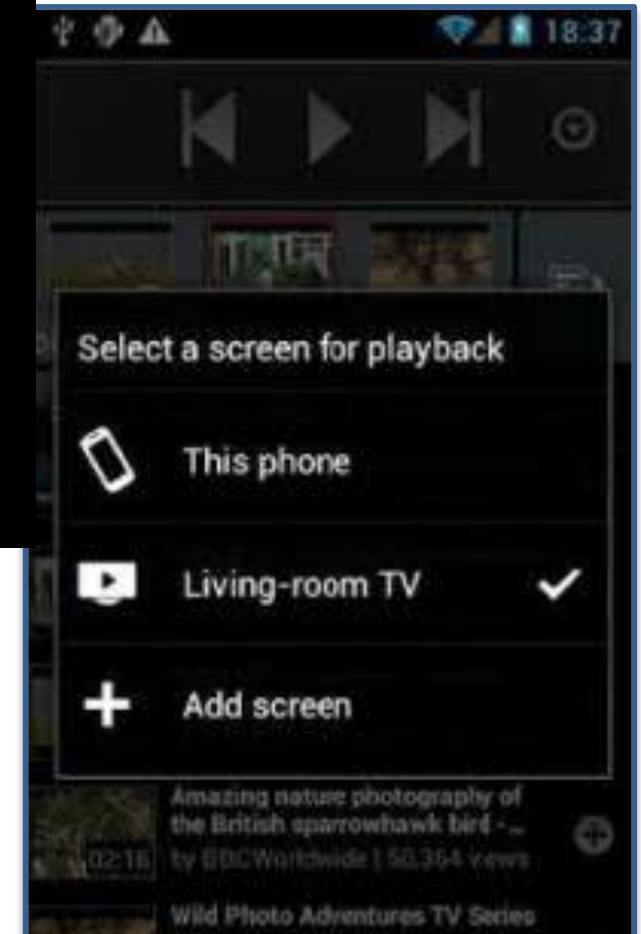


FIG. 4



Google MSJ Op. Br., Ex. 1 at ¶33
U.S. Patent Pub. 2011/0131520

e-Picker Screen








I also understand that the **functionality was released in a January 2012 update**, as can be seen in the image on the right, taken from a February 2, 2012 capture from the Internet Archive's Way Back Machine.

Google MSJ Op. Br., Ex. 1 at ¶170

Google MSJ Op. Br., Ex. 1 at ¶170, Ex. 14 (WayBack Capture)
GOOG-SONOS-NDCA-00108095 at 114

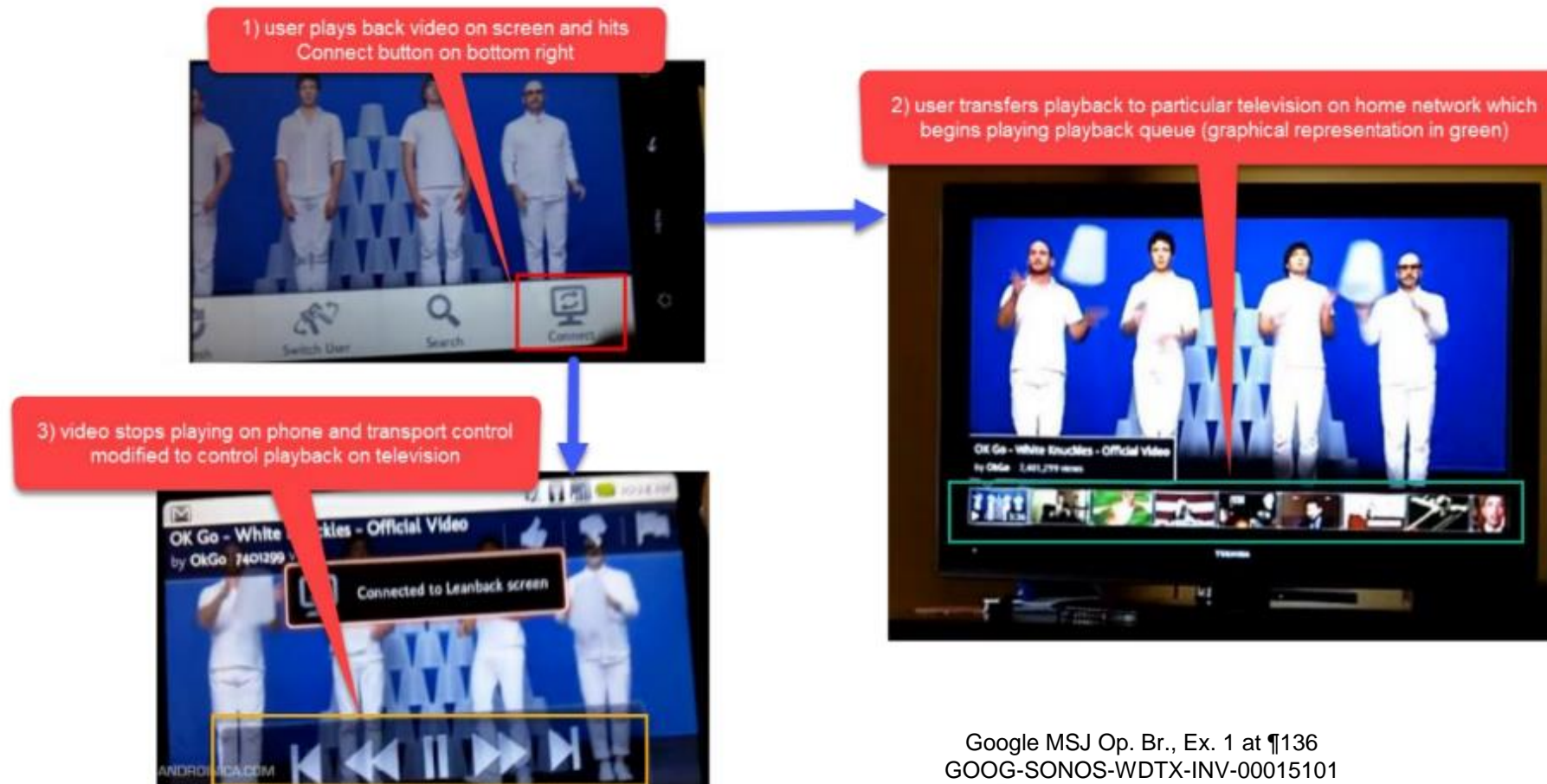
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Limitation 13.5(b) Is Disclosed By The YouTube Remote

The YouTube Remote Application Stops Playback And Controls The Screen









Google MSJ Op. Br., Ex. 1 at ¶136
GOOG-SONOS-WDTX-INV-00015101

<https://www.youtube.com/watch?v=EGdsOslqG2s> (uploaded 11/14/210) at 1:00-1:30







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Limitations 13.5 and 13.6 Are Disclosed By YouTube Remote

- ▶ Sonos ignores (and does not dispute) that disclosures in the YTR API document and source code demonstrate Limitations 13.5 and 13.6 are met
- ▶ Sonos instead argues Google has presented “insufficient corroboration” tying the documents to the first release of the YouTube Remote (November 9, 2010)

1 Further, Google’s own product development story confirms that the alleged November 9,
2 2010 prior art version of the YTR app is missing features of limitation 13.4. Specifically, Google
3 acknowledges that it was not until a later *non-prior art foreign* version of the YTR app that Google

14 (Un corroborated oral testimony by interested parties is insufficient as a matter of law to establish
15 invalidity of [a] patent.”) (citation omitted); *Juicy Whip, Inc., v. Orange Bang, Inc.*, 292 F.3d 728,
16 743 (Fed. Cir. 2002) (evidence presented by accused infringer was “insufficient as a matter of law
17 to surmount the clear and convincing evidence hurdle” because “[t]he testimony about the [alleged
18 prior art] came more than eight and twelve years, respectively, after the witnesses saw the [alleged
19 prior art].”); Ex. 1, ¶134. Likewise, Google’s “evidence” tying the source code to the November
20 9, 2010 YTR app is the same uncorroborated declaration of Mr. Levai. G.Ex. 11, ¶6.

21 Moreover, limitation 13.5 requires the “transferring playback” to include “causing the
22 playback at the control device to be *stopped*.” However, the November 14, 2010 video relied on
23 by Google does not establish that the media on the YTR device was “stopped.” See G.Ex. 1, ¶182.
24 To the contrary, the media on the phone’s screen appears to still be in a playback state (albeit
25 paused) after the alleged “transfer” of playback.

3. The YTR App Does Not Render Obvious Claim 13

26 Google’s conclusory and overly simplistic obviousness theories fail for numerous reasons.

28 ⁸ Google asserts that this added functionality was included in a 12/1/2011 capture of source code,
but that is irrelevant as it is also after Sonos’s uncontested 7/15/2011 invention date. G.Ex. 1, ¶170.

Limitations 13.5 and 13.6 Are Disclosed By YouTube Remote

DECLARATION OF JANOS LEVAI

I, Janos Levai, declare as follows:

1. I have personal knowledge of the facts set forth in this declaration, and I could and would testify competently thereto if called upon to do so.
2. I am a Software Engineer at Google based in Zurich, Switzerland. I joined Google in July 2011 as an intern and full time in March 2012. In 2011, I worked on the YouTube Remote application and MDx protocol, as well as the integration of YouTube Remote functionality into the YouTube mobile website. In 2012, I began working on the YouTube Main application including integrating the YouTube Remote functionality into the YouTube Main applications for iOS and Android. This was the primary focus of my work until at least 2016. I also worked on maintaining and improving the MDx protocol.
3. Work on Version 1 of the MDx protocol began no later than May of 2010 in connection with our development of Google's YouTube Remote application. The YouTube Remote application was an application that allowed users to transfer playback of a YouTube video from their Android device to a television screen, and thereafter control playback of the video using the Android device. Videos were played back on the television by retrieving them from Bandid content servers in Google's Content Delivery Network.
4. On November 9, 2010, the YouTube Remote application was first released for download by members of the public on the Android Marketplace, which was the application store for Android at the time and the predecessor to today's Google Play Store. This release of the YouTube Remote used Version 1 of the MDx protocol. Google released additional versions of the YouTube Remote over the years, until the application was discontinued. I worked on development of subsequent versions of the MDx protocol, with development of Version 2











Undisputed testimony confirms YouTube Remote API describes the first release of the YouTube Remote application

9. I have attached as **Appendix 2** a true and accurate copy of the YouTube Remote API page. The document **generally describes the API for the first release of the YouTube Remote application.**

Google MSJ Op. Br., Ex. 11 at ¶9

Case 3:20-cv-06754-WHA Document 321-4 Filed 08/15/22 Page 109 of 212

Claim 13 Of The '615 Patent Is Invalid

| CLAIM 13 | |
|---|---|
| 13[pre]. A tangible, non-transitory computer readable storage medium including instructions for execution by a processor, the instructions, when executed, cause a control device to implement a method comprising: |  |
| 13.1 causing a graphical interface to display a control interface including one or more transport controls to control playback by the control device; |  |
| 13.2 after connecting to a local area network via a network interface, identifying playback devices connected to the local area network; |  |
| 13.3 causing the graphical interface to display a selectable option for transferring playback from the control device; |  |
| 13.4 detecting a set of inputs to transfer playback from the control device to a particular playback device, wherein the set of inputs comprises: (i) a selection of the selectable option for transferring playback from the control device and (ii) a selection of the particular playback device from the identified playback devices connected to the local area network: |  |
| 13.5 after detecting the set of inputs to transfer playback from the control device to the particular playback device, causing playback to be transferred from the control device to the particular playback device, wherein transferring playback from the control device to the particular playback device comprises: |  |
| (a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device, wherein adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service; |  |
| (b) causing playback at the control device to be stopped; and |  |
| (c) modifying the one or more transport controls of the control interface to control playback by the playback device; and |  |
| 13.6 causing the particular playback device to play back the multimedia content, wherein the particular playback device playing back the multimedia content comprises the particular playback device retrieving the multimedia content from one or more second cloud servers of a streaming content service and playing back the retrieved multimedia content. |  |

Invalidity MSJ ('885 Patent, Claim 1)



July 13, 2022
Google, LLC v. Sonos, Inc.
Case: 3:20-cv-06754

Claim 1 of the '885 Patent is Unpatentable Under 35 U.S.C. 101

Step 1: The Claim is Directed to an Abstract Idea

Legal Standard: Step One Analyzes If the Claim Is Directed To An Abstract Idea


Alice Step One



First, the court must identify whether a claim is directed to an **abstract idea**. To do this, the court must identify the purpose of the claim—in other words, what the claimed invention is trying to achieve—and ask whether that purpose is abstract. . . . After determining the claim’s purpose, the court then asks whether this purpose is abstract. **Age-old ideas are likely abstract**, in addition to basic tools of research and development, like natural laws and fundamental mathematical relationships.

California Inst. of Tech. v. Hughes Commc’ns Inc., 59 F. Supp. 3d 974, 991 (C.D. Cal. 2014)

The Inventors Did Not Invent Speaker Groups or Zones



US10848885B2

(12) **United States Patent**
Lambourne

(10) **Patent No.:** US 10,848,885 B2
(45) **Date of Patent:** *Nov. 24, 2020

(54) **ZONE SCENE MANAGEMENT**

(71) Applicant: **SONOS, INC.**, Santa Barbara, CA (US)

(72) Inventor: **Robert A. Lambourne**, Santa Barbara, CA (US)

(73) Assignee: **Sonos, Inc.**, Santa Barbara, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.
This patent is subject to a terminal disclaimer.

(21) Appl. No.: **16/383,561**

(22) Filed: **Apr. 12, 2019**

(65) **Prior Publication Data**
US 2019/0239008 A1 Aug. 1, 2019
Related U.S. Application Data

(63) Continuation of application No. 15/130,919, filed on Apr. 15, 2016, which is a continuation of application (Continued)

(51) **Int. Cl.**
G06F 17/00 (2019.01)
H04R 27/00 (2006.01)
(Continued)

(52) **U.S. CL.**
CPC **H04R 27/00** (2013.01); **G05B 15/02** (2013.01); **G06F 3/0482** (2013.01);
(Continued)

(58) **Field of Classification Search**
CPC H04R 27/00; H04R 3/12; H04R 2227/005; H04R 2430/01; G05B 15/02;
(Continued)

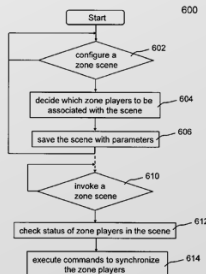
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3,956,591 A 5/1976 Gates, Jr.
4,105,974 A 8/1978 Rogers
(Continued)

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CA 2329451 A1 3/2001
CN 1598767 A 3/2005
(Continued)

OTHER PUBLICATIONS
Yamaha DME Designer 3.5 user manual (Year: 2004).
(Continued)

(57) **ABSTRACT**
An example playback device in a first zone of a media playback system receives a first indication that the first zone has been added to a first zone scene including a first preconfigured grouping of zones including the first zone and a second zone. The playback device receives a second indication that the first zone has been added to a second zone scene including a second preconfigured grouping of zones including the first zone and a third zone. After a given one of the first and second zone scenes has been selected for invocation, the playback device receives an instruction to operate in accordance with the given zone scene, and based on the instruction, begins operating in accordance with the given zone scene such that the playback device is configured to play back audio in synchrony with one or more other playback devices in the media playback system.

20 Claims, 11 Drawing Sheets



In order to achieve playing different audio sources in different audio players, the traditional multi-zone audio system is generally either hard-wired or controlled by a pre-configured and pre-programmed controller. While the pre-programmed configuration may be satisfactory in one situation, it may not be suitable for another situation. For example, a person would like to listen to broadcast news from his/her favorite radio station in a bedroom, a bathroom and a den while preparing to go to work in the morning. The same person may wish to listen in the den and the living room to music from a compact disc in the evening. In order to satisfy such requirements, two groups of audio players must be established. In the morning, the audio players in the bedroom, the bathroom and the den need to be grouped for the broadcast news. In the evening, the audio players in the den and the living room are grouped for the music. Over the weekend, the audio players in the den, the living room, and a kitchen are grouped for party music. Because the morning group, the evening group and the weekend group contain the den, it can be difficult for the traditional system to accommodate the requirement of dynamically managing the ad hoc creation and deletion of groups.

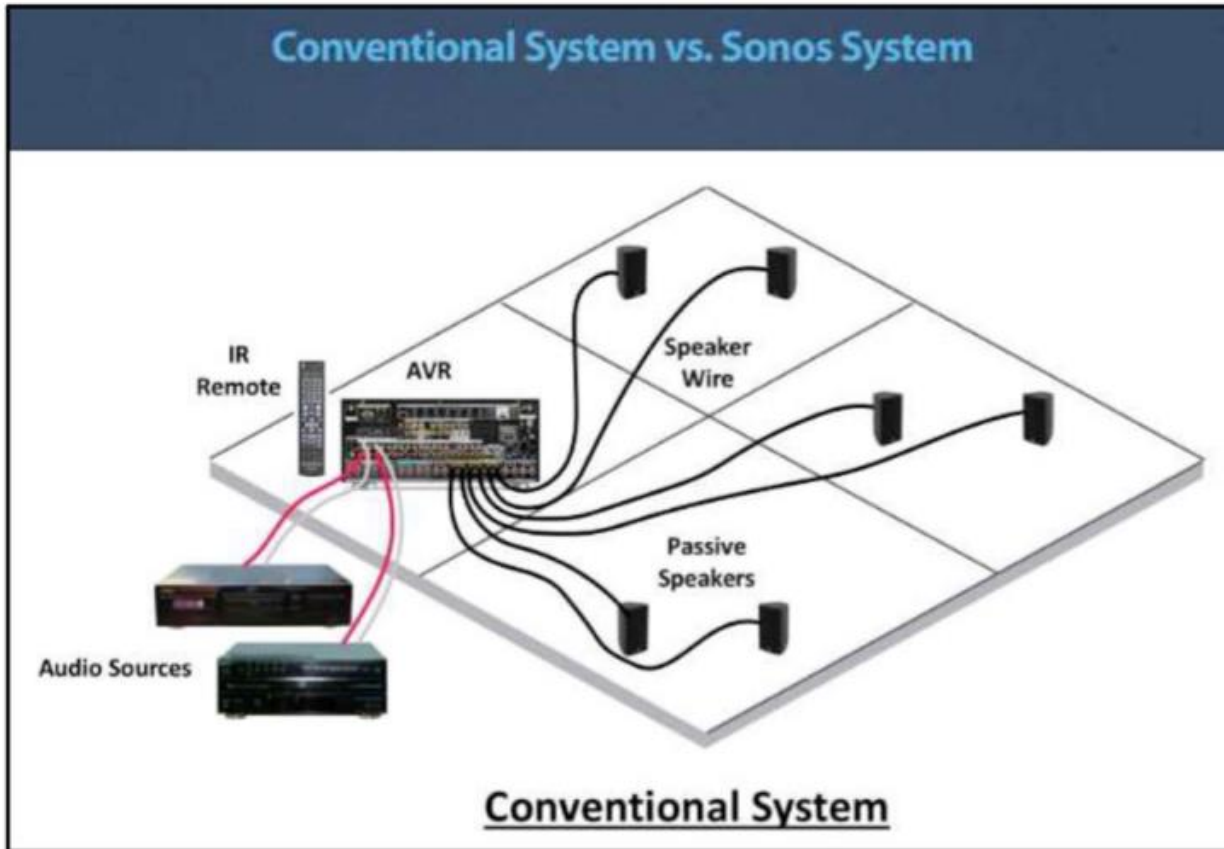
'885 Patent at 1:62-2:17

The Alleged Invention is the Abstract Idea of “Computerizing” the Grouping of Speakers for Simultaneous Playback

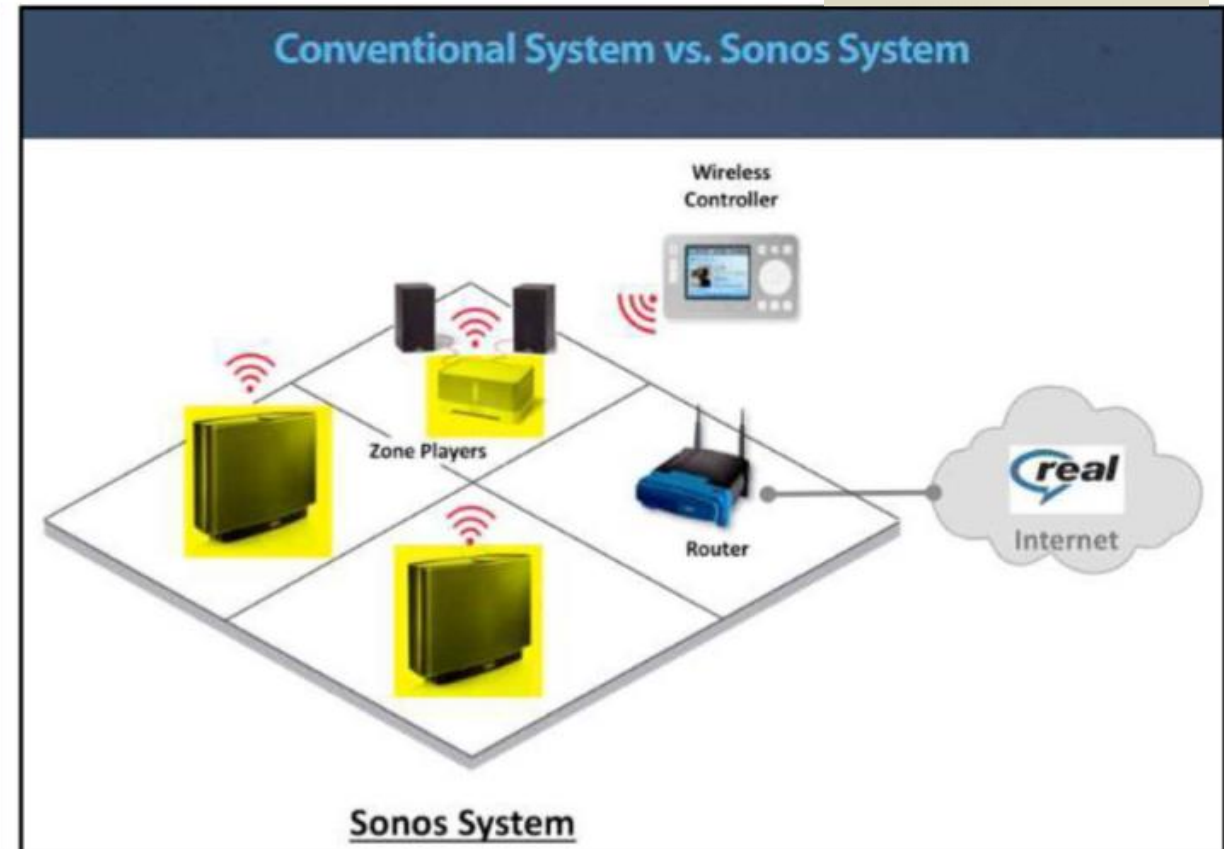
Sonos argues that the invention innovated over conventional systems with wireless connections and internet media rather than speaker wires and local audio sources

SONOS

Conventional System vs. Sonos System



Conventional System vs. Sonos System



Sonos's Technology Tutorial

Making Speaker Grouping Wireless is Not Claimed and is an Abstract Idea

Merely making existing speaker groups wireless is an abstract idea (and not claimed)

'885 Patent is not limited to wireless systems

The network 108 may be a wired network, a wireless network or a combination of both. In one example, all devices including the zone players 102, 104 and 106 are coupled to the network 108 by wireless means based on an industry standard such as IEEE 802.11. In yet another example, all devices including the zone players 102, 104 and

'885 Pat., 4:62-67

Wireless capability alone is insufficient



“The broad concept of **communicating information wirelessly**, without more, is an **abstract idea**.”

Sensormatic Elecs., LLC v. Wyze Labs, 25 Inc., No. 2020-2320, 2021 WL 2944838, at *3 (Fed. Cir. July 14, 2021)

Legal Standard: An Abstract Idea Is One That Includes Tasks Relying on Known Hardware Used in Its “Ordinary Capacity”

Unpatentable Abstract Idea vs. Patentable Improvement In Computer Functionality



Is the claimed invention directed to “**technical details of the [claimed] components**” or are the claimed elements described in “**purely functional terms**”?

Dropbox, Inc. v. Synchronoss Techs., Inc., 371 F. Supp. 3d 668, 687 (N.D. Cal. 2019), 815 F. App’x 529 (Fed. Cir. 2020)



Are the claims “directed to the use of **conventional or generic technology in a nascent but well-known environment**, without any claim that the invention reflects an inventive solution to any problem presented by combining the two?” . . . Limiting “the abstract idea to a particular environment” . . . “does not make the claims any less abstract for the step 1 analysis.”

In re TLI Commc’ns LLC Pat. Litig., 823 F.3d 607, 612-613 (Fed. Cir. 2016).



Is the “plain focus of the claims is on **an improvement to computer functionality** itself,” or is the claim directed to “tasks for which a **computer is used in its ordinary capacity**.”

Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1335–36 (Fed. Cir. 2016)

The Alleged Invention is the Abstract Idea of “Computerizing” the Grouping of Speakers for Simultaneous Playback

The '885 patent claims cover using speaker groups together

Claim 1 covers three functional steps:

1. A first zone player comprising:
a network interface that is configured to communicatively couple the first zone player to at least one data network;
one or more processors;
a non-transitory computer-readable medium; and
program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

(i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

(ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

'885 Patent

The Alleged Invention is the Abstract Idea of “Computerizing” the Grouping of Speakers for Simultaneous Playback

The '885 patent claims cover using speaker groups together

Claim 1 covers three functional steps:

1. A first zone player comprising:
a network interface that is configured to communicatively couple the first zone player to at least one data network;
one or more processors;
a non-transitory computer-readable medium; and
program instructions stored on the non-transitory computer-readable medium and executable by the one or more processors to:

(1) receiving notice of being added to a first "zone scene" with a second player

(i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

(ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to coordinate with a given one of the first and second predefined groupings of zone players;

based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

'885 Patent

The Alleged Invention is the Abstract Idea of “Computerizing” the Grouping of Speakers for Simultaneous Playback

The '885 patent claims cover using speaker groups together

Claim 1 covers three functional steps:

1. A first zone player comprising:
a network interface that is configured to communicatively couple the first zone player to at least one data network;
one or more processors;
a non-transitory computer-readable medium; and
program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least one other zone player:

(i) receiving, from a network, a first indication that the first zone player has been added to a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

(ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players, wherein the first zone player is configured to play back media in accordance with the given one of the first and second predefined groupings of zone players with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

(2) **receiving** notice of being added to a second "zone scene" with a third player

'885 Patent

The Alleged Invention is the Abstract Idea of "Computerizing" the Grouping of Speakers for Simultaneous Playback

The '885 patent claims cover using speaker groups together

(3) once one of the "zone scenes" has been selected, **transitioning** from operating as a standalone player to playing media in synchrony with at least one of the other players

Claim 1 covers three functional steps:

while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

(i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

(ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;


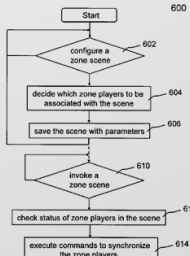
after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

'885 Patent

Case 3:20-cv-06754-WHA Document 321-4 Filed 05/15/22 Page 121 of 212

The specification describes the relevant technology as controlling speaker groups

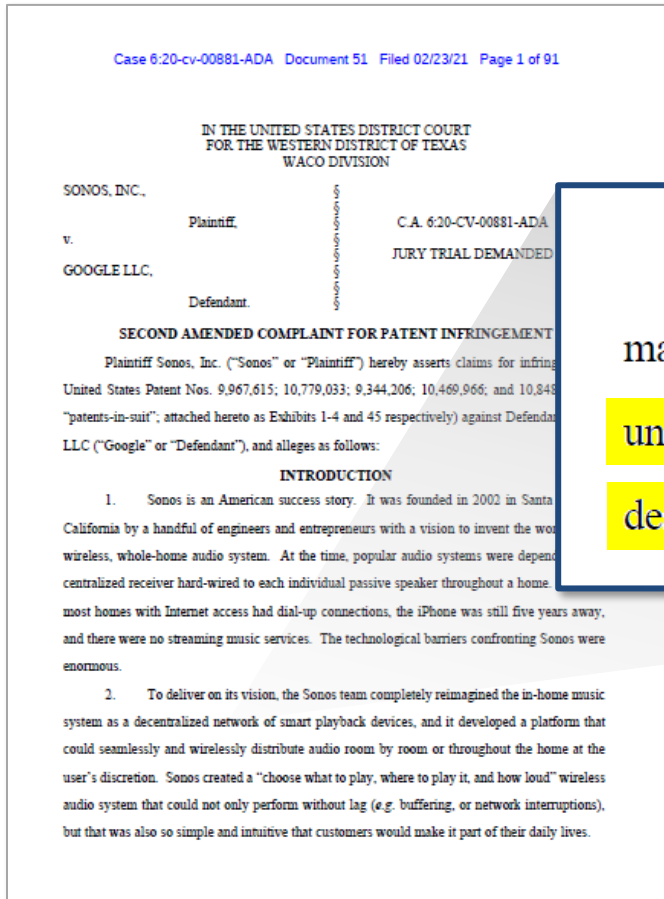
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|--|--|---|
| | |  |
| | | USO1084888B2 |
| (12) United States Patent Lambourne | (10) Patent No.: US 10,848,885 B2 (45) Date of Patent: *Nov. 24, 2020 | |
| (54) ZONE SCENE MANAGEMENT | (56) References Cited | |
| (71) Applicant: SONOS, INC. , Santa Barbara, CA (US) | U.S. PATENT DOCUMENTS | |
| (72) Inventor: Robert A. Lambourne , Santa Barbara, CA (US) | 3,956,591 A 5/1976 Gates, Jr. 4,105,974 A 8/1978 Rogers (Continued) | |
| (73) Assignee: Sonos, Inc. , Santa Barbara, CA (US) | FOREIGN PATENT DOCUMENTS | |
| (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days. This patent is subject to a terminal disclaimer. | CN 2320451 A1 3/2001 CN 1598707 A 3/2005 (Continued) | |
| (21) Appl. No.: 16/383,561 | OTHER PUBLICATIONS | |
| (22) Filed: Apr. 12, 2019 | Yamaha DME Designer 3.5 user manual (Year: 2004).* | |
| (65) Prior Publication Data US 2019/0239008 A1 Aug. 1, 2019 | (Continued) | |
| Related U.S. Application Data | <i>Primary Examiner</i> — Paul C McCord | |
| (63) Continuation of application No. 15/130,919, filed on Apr. 15, 2016, which is a continuation of application (Continued) | (57) ABSTRACT | |
| (51) Int. Cl. G06F 17/00 (2019.01) H04R 27/00 (2006.01) (Continued) | An example playback device in a first zone of a media playback system receives a first indication that the first zone has been added to a first zone scene including a first preconfigured grouping of zones including the first zone and a second zone. The playback device receives a second indication that the first zone has been added to a second zone scene including a second preconfigured grouping of zones including the first zone and a third zone. After a given one of the first and second zone scenes has been selected for invocation, the playback device receives an instruction to operate in accordance with the given zone scene, and based on the instruction, begins operating in accordance with the given zone scene such that the playback device is configured to play back audio in synchrony with one or more other playback devices in the media playback system. | |
| (52) U.S. CL. CPC H04R 27/00 (2013.01); G05B 15/02 (2013.01); G06F 3/0482 (2013.01); (Continued) | 20 Claims, 11 Drawing Sheets | |
| (58) Field of Classification Search CPC H04R 27/00; H04R 3/12; H04R 2227/005; H04R 2430/01; G05B 15/02; (Continued) |  | |

In general, the present invention pertains to controlling a plurality of multimedia players, or simply players, in groups.

'885 Patent at 2:36-37

The Alleged Invention is the Abstract Idea of “Computerizing” the Grouping of Speakers for Simultaneous Playback

Sonos agrees that the alleged invention solves “problems related to grouping zone players”



SONOS

75. The '885 Patent claims devices, computer-readable media, and methods for managing and operating in accordance with different “zone scenes,” which provides an unconventional solution to the technological problems related to grouping zone players that are described in the '885 Patent.

Sonos Inc. v. Google LLC, No. 4:21- cv-07559, *Second Amended Complaint*, Dkt. 51 ¶ 75 (N.D. Cal. Feb. 23, 2021)

The Alleged Invention is the Abstract Idea of “Computerizing” the Grouping of Speakers for Simultaneous Playback

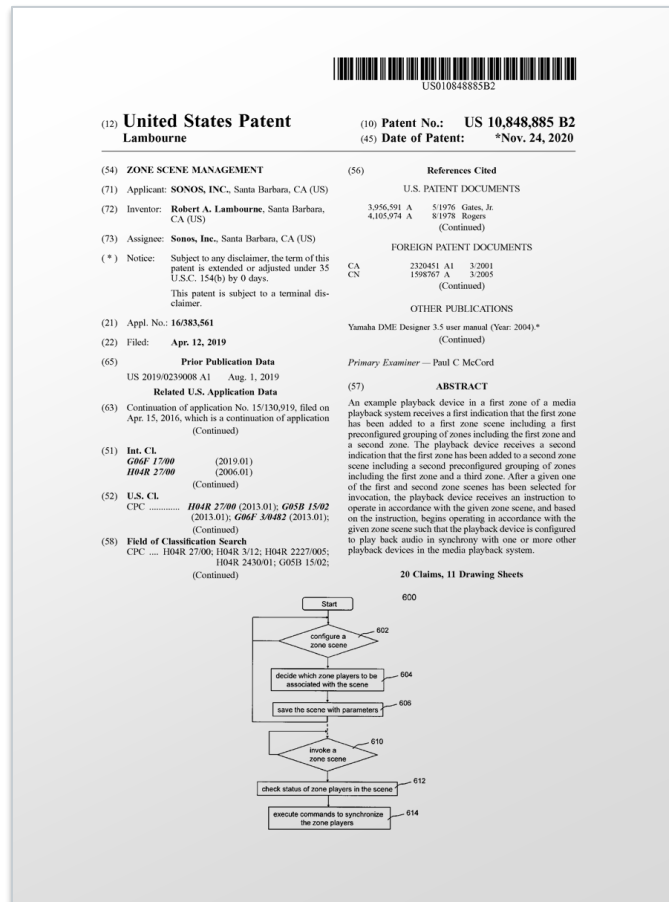
The invention allegedly facilitates dynamic management of groups

may be readily grouped. In a traditional multi-zone audio system, the audio players have to be adjusted one at a time, resulting in an inconvenient and non-homogenous audio environment. Further, there is a need to individually or

'885 Patent at 2:20-24

a kitchen are grouped for party music. Because the morning group, the evening group and the weekend group contain the den, it can be difficult for the traditional system to accommodate the requirement of dynamically managing the ad hoc creation and deletion of groups.

'885 Patent at 2:13-17



Sonos argues that adding computerized technology was the improvement of “zone players” and “zone scenes” over conventional systems

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17 UNITED STATES DISTRICT COURT
18 NORTHERN DISTRICT OF CALIFORNIA
19 SAN FRANCISCO DIVISION

20 GOOGLE LLC,
21 Plaintiff and Counterdefendant,
22 v.
23 SONOS, INC.,
24 Defendant and Counterclaimant.

Case No. 3:20-cv-06754-WHA
Related Case No. 3:21-cv-07559-WHA
**SONOS'S REPLY IN SUPPORT OF ITS
MOTION FOR SUMMARY JUDGMENT
OF INFRINGEMENT OF '885 PATENT
CLAIM 1**
Date: June 9, 2022
Time: 8:00 a.m.
Place: Courtroom 12, 19th Floor
Judge: Hon. William Alsup
Complaint Filed: September 28, 2020

PUBLIC REDACTED VERSION

SONOS'S REPLY ISO OF ITS MSJ
3:20-cv-06754-WHA

[C]laim 1 recites a **“zone player”** in a “networked media playback system” . . . that improves upon “conventional multi-zone audio system[s]” comprised of “audio players” that were connected by speaker wire to a centralized A/V receiver and **did not have the capability to communicate over a data network or process digital data . . .**

[T]his **“zone scene”** technology provides additional improvements over “conventional multi-zone audio system[s],” which were **“hard-wired,” “pre-configured,”** and **“pre-programmed”** in a way that made it “inconvenient” (if not impossible) to group “audio players” for playback. ’885 Pat., 1:63-24.

Sonos Reply ISO of MSJ at 13

Computerizing Speaker Grouping is an Abstract Idea

The mere automation of manual processes
using generic computer components is directed to an abstract idea



[C]laim 1, together with the specification, makes clear that the focus of the claimed advance is **simply the abstract idea of automating the AV-captioning process**. That process . . . is not itself asserted to be an advance over the prior art. **The focus is not any specific improved computer techniques for performing those functions—functions intrinsic to the concept of AV captioning—but simply the use of computers to “conserve human resources” by automating work otherwise performed through human labor.**

Enco Sys., Inc. v. DaVincia, LLC, 845 Fed. App’x 953, 957 (Fed. Cir. 2021)

Computerizing Speaker Grouping is an Abstract Idea

Sonos agrees that mere automation of manual processes
using generic computer components is abstract

SONOS

14 Moreover, the Federal Circuit has been clear that the specific benefits Google identifies do
15 not weigh in favor of eligibility. In particular, the Federal Circuit has held that automating human
16 processes or performing those processes “more efficiently via a computer does not alter the
17 patentability of the claimed subject matter.” *Bancorp*, 687 F.3d at 1278; *id.* at 1279 (“Using a
18 computer to accelerate an ineligible mental process does not make that process patent-eligible.”);
19 *see also Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306, 1316 (Fed. Cir. 2019), *cert. denied sub*
20 *nom. Garmin USA, Inc. v. Cellspin Soft, Inc.*, 140 S. Ct. 907 (2020) (“[T]he need to perform tasks
21 automatically is not a unique technical problem.”). Because the benefits Google claims in the

Sonos, Inc. v. Google LLC, No. 3:20-cv-03845-EMC, Dkt. 39 at 10 (N.D. Cal. Sept. 10, 2019)

Sonos's Alleged Innovation Fails Because it Depends on User's Subjective State of Mind

To meet the required “zone scene,” Sonos accuses the user’s subjective mental state when naming a group of speakers—which is not patentable



A “Mental Process” Is an Unpatentable Abstract Idea



[T]he asserted claims are directed to the process of inference, which is fundamental to [integrated chip] design and can be performed mentally. The claims describe, in essence, various algorithms for determining the hardware components and layout of an [integrated chip] from a user’s description of what the user needs the chip to do, i.e., the “specified signals and circumstances under which the signal are produced.” . . . **In other words, the claims are directed to a mental process. A “mental process is a subcategory of unpatentable abstract ideas.” . . . The asserted claims, like those in *Alice* and *Mayo*, add nothing other than a way to implement that mental process on a computer.**

Synopsys, Inc. v. Mentor Graphics Corp., 78 F. Supp. 3d 958, 965 (N.D. Cal. 2015), *aff’d*, 839 F.3d 1138 (Fed. Cir. 2016)

D&M Holdings is Inapposite

Case 1:14-cv-01330-WCB Document 242 Filed 03/13/17 Page 1 of 16 PageID #: 13497

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

SONOS, INC.,

Plaintiff,

v.

D&M HOLDINGS INC. d/b/a THE D+M
GROUP, D&M HOLDINGS U.S. INC., and
DENON ELECTRONICS (USA), LLC,

Defendants.

Civil Action No. 14-1330-RGA

MEMORANDUM OPINION

Phillip A. Rovner, Esq., POTTER ANDERSON & CORROON LLP, Wilmington, DE; Jonathan A. Choa, Esq., POTTER ANDERSON & CORROON LLP, Wilmington, DE; George I. Lee, Esq., LEE SULLIVAN SHEA & SMITH, LLP, Chicago, IL; Sean M. Sullivan, Esq., LEE SULLIVAN SHEA & SMITH, LLP, Chicago, IL; Rory P. Shea, Esq. (argued), LEE SULLIVAN SHEA & SMITH, LLP, Chicago, IL; J. Dan Smith, Esq., LEE SULLIVAN SHEA & SMITH, LLP, Chicago, IL; Michael P. Boyea, Esq., LEE SULLIVAN SHEA & SMITH, LLP, Chicago, IL.

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Attorneys for Defendant

March 13, 2017



Different patents



Out of circuit



Not binding precedent



Claimed “controller” and “user interface” limitations were held unconventional



Different construction of audio “players”

Sonos, Inc. v. D&M Holdings, Inc., No. CV 14-1330-RGA, 2017 WL 971700 (D. Del. Mar. 13, 2017)

Sonos's Alleged "comparable claims" Are Distinguishable

CardioNet, LLC v. InfoBionic, Inc., 955 F.3d 1358 (Fed. Cir. 2020)

- “The '207 patent describes cardiac monitoring systems and techniques for detecting and distinguishing **atrial fibrillation** and atrial flutter from other various forms of cardiac arrhythmia.”

Huawei Techs., Co, Ltd v. Samsung Elecs. Co, Ltd., No. 3:16-CV-02787-WHO, 2016 WL 6834614, at *1 (N.D. Cal. Nov. 21, 2016) (citations omitted)

- “The ‘892 and ‘239 patents, which Samsung moves to dismiss, aim to **reduce signal interference when a mobile device connects to a cellular network**. This process involves a series of steps, termed a ‘random access procedure.’”

MicroPairing Techs. LLC v. Am. Honda Motor Co., No. CV 21-4034JVS(KESX), 2021 WL 6618817, at *1 (C.D. Cal. Dec. 9, 2021) (cleaned up)

- “U.S. Patent No. 6,778,073 (the '073 Patent) is directed to **‘[a] vehicle audio system [that] includes a wireless audio sensor configured to wirelessly detect different portable audio sources brought into the vehicle.’** From the audio sources detected, the system plays audio based on assigned priority values.”

M2M Sols. LLC v. Sierra Wireless Am., Inc., No. CV 14-1102-RGA, 2020 WL 7767639, at *9 (D. Del. Dec. 4, 2020), report and recommendation adopted, No. 14-CV-01102-RGA, 2021 WL 7441706 (D. Del. Mar. 31, 2021)

- “The claims are drawn to a specific programmable communicator device configured in a particular manner to **send outgoing wireless transmissions, using a memory to store a telephone number or IP address included within a transmission if the processing module authenticates the transmission with a coded number.**”

Step 2: The Claim Lacks a Transformative Inventive Concept

Legal Standard: Step Two Requires a Transformative Inventive Concept That Is Different From the Well Understood, Routine, and Conventional Elements of the Claim



The second step of the § 101 analysis requires us to determine whether the claim elements, when viewed individually and as an ordered combination, contain “an inventive concept sufficient to transform the claimed abstract idea into a patent-eligible application.” *Alice*, 134 S.Ct. at 2357. A **claim contains an inventive concept** if it “**include[s] additional features**” that are more than “well-understood, routine, conventional activities.”

Smart Sys. Innovations, LLC v. Chicago Transit Auth., 873 F.3d 1364, 1373-74 (Fed. Cir. 2017)

Legal Standard: Step Two Can Be Resolved as a Matter of Law

No genuine issue of material fact regarding invalidity exists



Whether a claim recites patent eligible subject matter is a question of law which may contain disputes over underlying facts. **Patent eligibility has in many cases been resolved on motions to dismiss or summary judgment. Nothing in this decision should be viewed as casting doubt on the propriety of those cases.** When there is no genuine issue of material fact regarding whether the claim element or claimed combination is well-understood, routine, conventional to a skilled artisan in the relevant field, this issue can be decided on summary judgment as a matter of law.

Berkheimer v. HP Inc., 881 F.3d 1360, 1368 (Fed. Cir. 2018)

The asserted claims rely on generic and conventional computer hardware

1. A first zone player comprising:

network interface

data network

computer-readable medium

processors

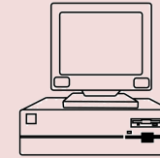
zone player

is configured to connect to the data network via the network interface and to receive program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform the following steps:

while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

(i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

(ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and



**GENERIC COMPUTER
HARDWARE**

- “[C]laims[] which merely require **generic computer implementation**[] fail to transform that abstract idea into a patent-eligible invention.”

Alice Corp. v. CLS Bank Int’l, 573 U.S. 208, 221 (2014)

- “[M]ere recitation of **concrete, tangible components** is insufficient ... where those components merely perform their ‘well-understood, routine, conventional’ functions.”

In re TLI Commc’ns LLC Pat. Litig., 823 F.3d 607, 613 (Fed. Cir. 2016)

- “[I]mprovements that come with the **incorporation of a computer** fail to qualify as an inventive concept.”

People.ai, Inc. v. SetSail Techs., Inc., 2021 WL 5882069, *10 N.D. Cal. (Dec. 13, 2021) (Alsup, J.)

Case 3:20-cv-06754-WHA Document 321-4 Filed 08/15/22 Page 143 of 212

Claim 1 Covers an Unpatentable Abstract Idea

1

Claim 1 covers the abstract idea of computerizing speaker groups for synchronous playback

2

Claim 1 adds nothing more than conventional and well understood computer functionality such as saving and dynamic access

3

The patent and Sonos's own documents confirm that the alleged novel features were routine and conventional

Claim 1 of the '885 Patent is Invalid Under 35 U.S.C. 112



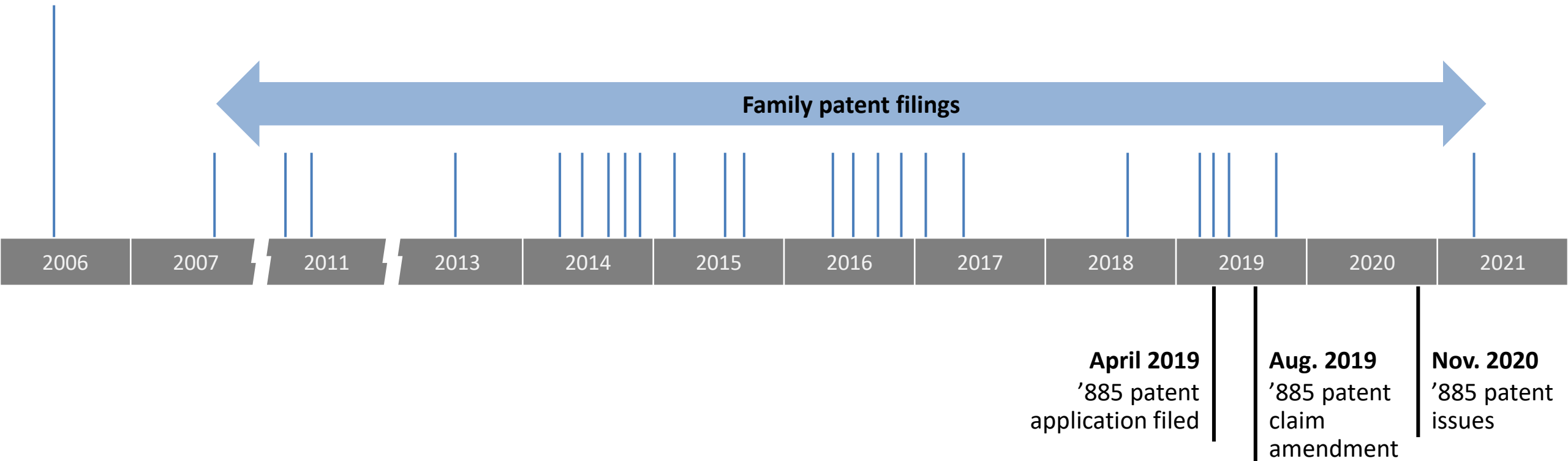
In determining whether the written description requirement is met, we consider “whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.”

Gen. Hosp. Corp. v. Sienna Biopharmaceuticals, Inc., 888 F.3d 1368, 1371 (Fed. Cir. 2018) (quoting *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (*en banc*)).

'885 Patent Prosecution Timeline

September 2006

Original filing date



August 2019 Claim Amendment

Sonos for the first time adds the 'standalone mode' limitations

1. (Currently Amended) A first zone player playback device comprising:
 - a network interface that is configured to communicatively couple the first zone player to at least one data network;
 - one or more processors;
 - a non-transitory computer-readable medium; and
 - program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player playback device to perform functions comprising:
 - while operating in a standalone mode in which the first zone player is configured to play back media individually in [[of]] a networked media playback system[[,]] comprising the first zone player and at least two other zone players:
 - (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first preconfigured predefined grouping of zones zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and
 - (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second preconfigured predefined grouping of zones zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

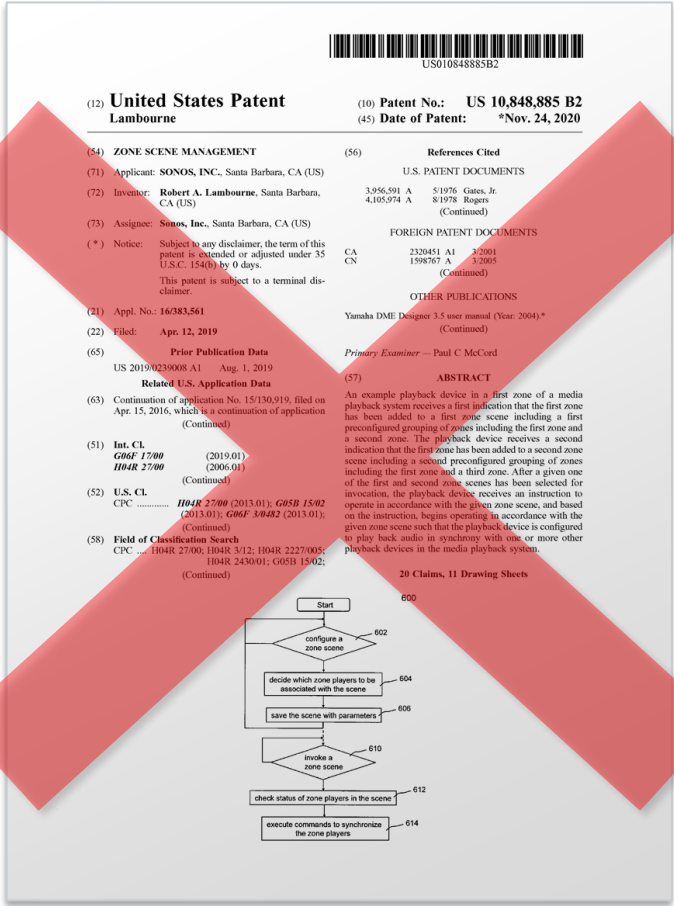
after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

after [[a]] the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with [[the]] a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

based on the instruction, beginning transitioning from operating in the standalone mode to operate operating in accordance with the given one of the first and second zone scenes predefined groupings of zone players such that the first zone player playback device is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to play back audio media in synchrony with one or more other playback devices in the media playback system the at least one other zone player in the given one of the first and second predefined groupings of zone players.

No Disclosure That a Zone Player Remains in Standalone Mode Once Added to a Group or “Transitions” To Group Mode Only “After Invocation”

Case 3:22-cv-00754-MHA Document 321-4 Filed 05/15/22 Page 143 of 212



The claims require:

“continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation”

and

“transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players.”

No Disclosure That a Zone Player Remains in Standalone Mode Once Added to a Group or “Transitions” To Group Mode Only “After Invocation”

“Standalone mode” is never mentioned in the specification nor is “transitioning.”

None of the three options were claimed

Provisional Application Appendix:

1.1.3 What happens to the Music that's already playing when a Zone Scene is started.

If no music is playing in any Zone – then the zones will simply link in a group.

If music is playing in one or more zones there are several possibilities (TBD)

1. The Music Queue in the zone group that was formed by the Zone Scene will be empty. In other words – the music will stop in any room that is part of the Zone Scene. This is the simplest solution, but may lead to frustration.
2. The user gets to choose from which of the 'joining' Queues the new zone group should play. This could be in the form of a dialog:

What should the new Zone Group play?

No Music

Track 1

Track 2

Radio Station A

Note that this method would only be useful (and possible) with simple Zone Scene grouping. With Advanced Zone Scene groupings, this dialog would become much too complicated.

3. In the case where only one of the zones in the new group was playing music, the new group should take the music (and Queue) of that zone.

The Four Corners of the Specification Must Show Possession of the Invention



Whatever the specific articulation, the test requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art. Based on that inquiry, the specification must describe an invention understandable to that skilled artisan and show that the inventor actually invented the invention claimed.

Ariad Pharms., Inc. v. Eli Lilly & Co., 598 F.3d 1336, 1351 (Fed. Cir. 2010)

Sonos Does Not Identify Transitioning Zone Players from Standalone to Group Mode Upon “Invocation” in the Specification

Sonos’s citations to the *specification* only describe creation of a zone scene—not that the zone scene is created for future use and inactive.

Sonos cites nothing in the *specification* that a “standalone” speaker continues playing back when added to a group or that it only transitions to group playback when the new group is “invoked.”

Sonos relies on its expert instead.

| | | |
|----|----------------------------------|---------------------------------------|
| 18 | GOOGLE LLC, | Case No. 3:20-cv-06754-WHA |
| 19 | Plaintiff and Counter-defendant, | Related to Case No. 3:21-cv-07559-WHA |
| 20 | v. | REPLY DECLARATION OF DR. KEVIN |
| 21 | SONOS, INC., | C. ALMEROTH IN SUPPORT OF |
| 22 | Defendant and Counter-claimant. | SONOS, INC.’S MOTION FOR |
| 23 | | SUMMARY JUDGMENT OF |
| 24 | | INFRINGEMENT OF ’885 PATENT |
| 25 | | CLAIM 1 |
| 26 | | |

Third, the ’885 Patent discloses that a “zone scene” is a group of “zone players” that is “predefined” and “saved” for future use during a “setup” phase, but is not activated for synchronous playback at that time. *Supra* II.B.i; ’885 Pat., 8:45-51, 10:4-19, 10:36-52, 11:12-19; D.I. 249-11, 1-2, 9-16; Ex. R, ¶55. Rather, the predefined group of “zone players” initially exists in an inactive state, which is what the ’885 Patent explains when distinguishing a “zone scene” from an ad-hoc group that is automatically activated at the time it is formed rather than being predefined and saved for future use. *Id.* In this respect, the ’885 Patent discloses that, unlike for an ad-hoc group, the act of adding “zone players” to a “zone scene” does not cause those “zone players” to become linked together for synchronous playback at that time. Ex. R, ¶53. This conveys to a POSITA that a “zone player” operating in “standalone mode” prior to being added to each new “zone scene” will continue to operate in “standalone mode” after being added to each new “zone scene.” *Id.*

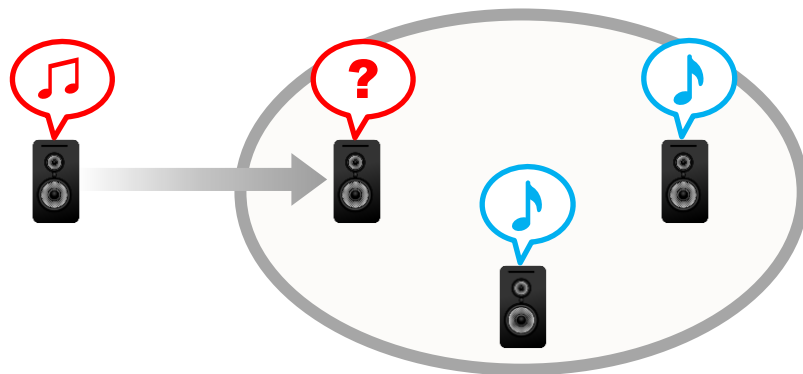
Sonos Reply ISO of its MSJ at 11-12

Sonos Does Not Identify Transitioning Zone Players from Standalone to Group Mode Upon “Invocation” in the Specification

Case 9:20-cv-06752-WHA Document 220-4 Filed 08/15/22 Page 152 of 212

Third, the '885 Patent discloses that a “zone scene” is a group of “zone players” that is “predefined” and “saved” for future use during a “setup” phase, but is not activated for synchronous playback at that time. *Supra* II.B.i; '885 Pat., 8:45-51, 10:4-19, 10:36-52, 11:12-19; D.I. 249-11, 1-2, 9-16; Ex. R, ¶55. Rather, the predefined group of “zone players” initially exists in an inactive state, which is what the '885 Patent explains when distinguishing a “zone scene” from an ad-hoc group that is automatically activated at the time it is formed rather than being predefined and saved for future use. *Id.* In this respect, the '885 Patent discloses that, unlike for an ad-hoc group, the act of adding “zone players” to a “zone scene” does not cause those “zone players” to become linked together for synchronous playback at that time. Ex. R, ¶53. This conveys to a POSITA that a “zone player” operating in “standalone mode” prior to being added to each new “zone scene” will continue to operate in “standalone mode” after being added to each new “zone scene.” *Id.*

Sonos Reply ISO of its MSJ at 11-12



may be sometimes quite time consuming. According to one embodiment, a set of zones can be dynamically linked together using one command. Using what is referred to herein as a theme or a zone scene, zones can be configured in a particular scene (e.g., morning, afternoon, or garden), where a predefined zone grouping and setting of attributes for the grouping are automatically effectuated.

'885 Patent at 8:45-51.

FIG. 5A shows a user interface 500 to allow a user to form a scene. The panel on the left shows the available zones in a household. The panel on the right shows the zones that have been selected and be grouped as part of this scene. Depending on an exact implementation of a user interface, Add/Remove buttons may be provided to move zones between the panels, or zones may be dragged along between panels.

FIG. 5B shows another user interface 520 to allow a user to form a scene. The user interface 520 that may be displayed on a controller or a computing device, lists available zones in a system. The list of zones in the user interface 520 includes ALL the zones in the system, including the zones that are already grouped. A checkbox is provide next to each of the zones so that a user may check in the zones to be associated with the scene.

'885 Patent at 10:4-19

Sonos Does Not Identify Transitioning Zone Players from Standalone to Group Mode Upon “Invocation” in the Specification

Case 9:20-cv-06752-WHA Document 220-4 Filed 08/15/22 Page 150 of 212

Third, the '885 Patent discloses that a “zone scene” is a group of “zone players” that is “predefined” and “saved” for future use during a “setup” phase, but is not activated for synchronous playback at that time. *Supra* II.B.i; '885 Pat., 8:45-51, 10:4-19, 10:36-52, 11:12-19; D.I. 249-11, 1-2, 9-16; Ex. R, ¶55. Rather, the predefined group of “zone players” initially exists in an inactive state, which is what the '885 Patent explains when distinguishing a “zone scene” from an ad-hoc group that is automatically activated at the time it is formed rather than being predefined and saved for future use. *Id.* In this respect, the '885 Patent discloses that, unlike for an ad-hoc group, the act of adding “zone players” to a “zone scene” does not cause those “zone players” to become linked together for synchronous playback at that time. Ex. R, ¶53. This conveys to a POSITA that a “zone player” operating in “standalone mode” prior to being added to each new “zone scene” will continue to operate in “standalone mode” after being added to each new “zone scene.” *Id.*

Sonos Reply ISO of its MSJ at 11-12

September 19, 2019

Added

The process 600 is initiated only when a user decides to proceed with a zone scene at 602. The process 600 then moves to 604 where it allows a user to decide which zone players to be associated with the scene. For example, there are ten players in a household, and the scene is named after “Morning”. The user may be given an interface to select four of the ten players to be associated with the scene. **At 606, the scene is saved.** The scene may be saved in any one of the members in the scene. In the example of FIG. 1, **the scene is saved in one of the zone players and displayed on the controller 142.** In operation, a set of data pertaining to the scene includes a plurality of parameters. In one embodiment, the parameters include, but may not be limited to, identifiers (e.g., IP address) of the associated players and a playlist. The parameters may also include volume/tone settings for the associated players in the scene. The user may go back to 602 to configure another scene if desired.

'885 Patent at 10:36-52.

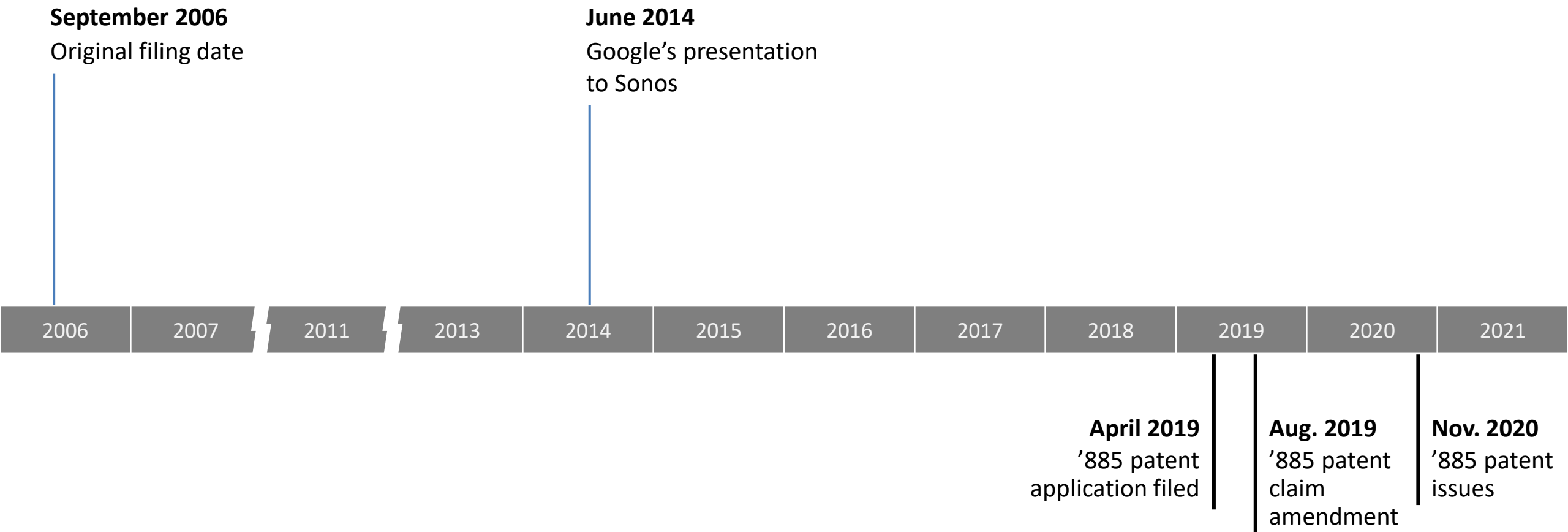
FIG. 7 shows an example user interface for invoking a zone scene. The user interface of **FIG. 7** shows a Zone Menu that includes selectable indications of zone scenes.

FIG. 8 shows another example user interface for invoking a zone scene. **FIG. 8** shows a Zone Menu that includes a softkey indicating a Scenes menu. Pressing the Scenes softkey will show the Scenes menu where all the available zone scenes are shown as selectable indications.

'885 Patent at 11:12-19.

Case 3:20-cv-00034-MMA Document 321-2 Filed 05/15/22 Page 24 of 212

Sonos Was Not in Possession of the August 2019 Claim Amendment At the Time of the Original Filing 13 Years Prior in 2006



Noninfringement MSJ ('885 Patent, Claim 1)



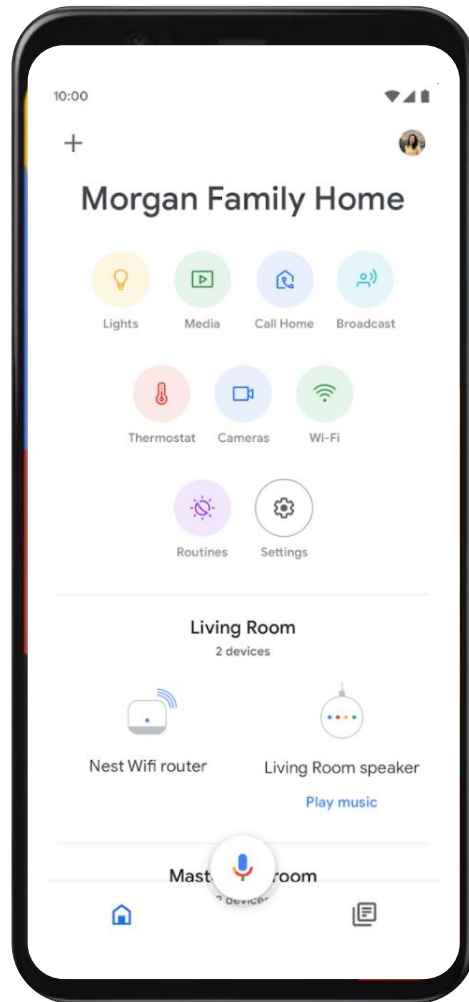
July 13, 2022
Google, LLC v. Sonos, Inc.
Case: 2:20-cv-06754

Claim 1 of the '885 Patent Is Not Infringed

1

Google Products Do Not Contain a “Zone Scene”

Accused Products: Devices with the Google Home App




(54) ZONE SCENE MANAGEMENT

(57)

ABSTRACT

An example computing device in a media playback system receives a first request to create a first **zone scene** including a first preconfigured grouping of zones including a first zone and a second zone, and based on the first request, causes creation and storage of the first **zone scene**. The computing device receives a second request to create a second **zone scene** including a second preconfigured grouping of zones including the first zone and a third zone, and based on the second request, causes creation and storage of the second **zone scene**. While displaying a representation of the first **zone scene** and a representation of the second **zone scene**, the computing devices receives a third request to invoke the first **zone scene**, and based on the third request, causes the first **zone scene** to be invoked such that the first zone and the second zone become configured for synchronous playback of media.

'885



US01084885B2

United States Patent

Robert A. Lambourne

(10) Patent No.: **US 10,848,885 B2**

(45) Date of Patent: ***Nov. 24, 2020**

(1) **ZONE SCENE MANAGEMENT**

(71) Applicant: **SONOS, INC.**, Santa Barbara, CA (US)

(72) Inventor: **Robert A. Lambourne**, Santa Barbara, CA (US)

(73) Assignee: **Sonos, Inc.**, Santa Barbara, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **16/383,561**

(22) Filed: **Apr. 12, 2019**

(65) **Prior Publication Data**
US 2019/0239008 A1 Aug. 1, 2019

Related U.S. Application Data

(63) Continuation of application No. 15/130,919, filed on Apr. 15, 2016, which is a continuation of application (Continued)

(51) **Int. Cl.**
G06F 17/00 (2019.01)
H04R 27/00 (2006.01)
(Continued)

(52) **U.S. Cl.**
H04R 27/00 (2013.01); **G05B 15/02** (2013.01); **G06F 3/0482** (2013.01);
(Continued)

(58) **Field of Classification Search**
CPC: H04R 27/00; H04R 3/12; H04R 2227/005; H04R 2430/01; G05B 15/02;
(Continued)

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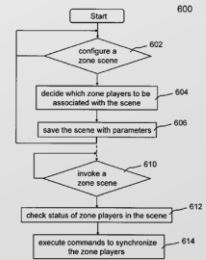
Yamaha DME Designer 3.5 user manual (Year: 2004)*
(Continued)

Primary Examiner — Paul C. McCord

(57) **ABSTRACT**

An example playback device in a first zone of a media playback system receives a first indication that the first zone has been added to a first zone scene including a first preconfigured grouping of zones including the first zone and a second zone. The playback device receives a second indication that the first zone has been added to a second zone scene including a second preconfigured grouping of zones including the first zone and a third zone. After a given one of the first and second zone scenes has been selected for invocation, the playback device receives an instruction to operate in accordance with the given zone scene, and based on the instruction, begins operating in accordance with the given zone scene such that the playback device is configured to play back audio in synchrony with one or more other playback devices in the media playback system.

20 Claims, 11 Drawing Sheets



```

graph TD
    Start([Start]) --> 600
    600 --> 602{configure a zone scene}
    602 --> 604{decide which zone players to be associated with the scene}
    604 --> 606{save the scene with parameters}
    606 --> 610{invoke a zone scene}
    610 --> 612{check status of zone players in the scene}
    612 --> 614{execute commands to synchronize the zone players}
    614 --> 610
    
```

5

“Zone Scene” Was Construed by the Western District Court

Sonos Never Formally Sought Reconsideration

The construction for that claim term is going to be: A
previously-saved group of zone players according to a common
theme.

W.D. Tex. Dkt. 106 (Markman Hearing Tr.) at 38:1-3

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IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

SONOS, INC. * August 10, 2021
VS. * CIVIL ACTION NO. W-20-CV-881
GOOGLE LLC *

BEFORE THE HONORABLE ALAN D. ALB
DISCOVERY HEARING (via Zoom)

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KRISTIE M. DAVIS, OFFICIAL COURT REPORTER
U.S. DISTRICT COURT, WESTERN DISTRICT OF TEXAS (WACO)



A court has the power to revisit prior decisions of its own or of a coordinate court in any circumstance, although as a rule courts should be loathe to do so in the absence of extraordinary circumstances such as where the initial decision was “clearly erroneous and would work a manifest injustice.”

Christianson v. Colt Indus. Operating Corp., 486 U.S. 800, 817–18 (1988)

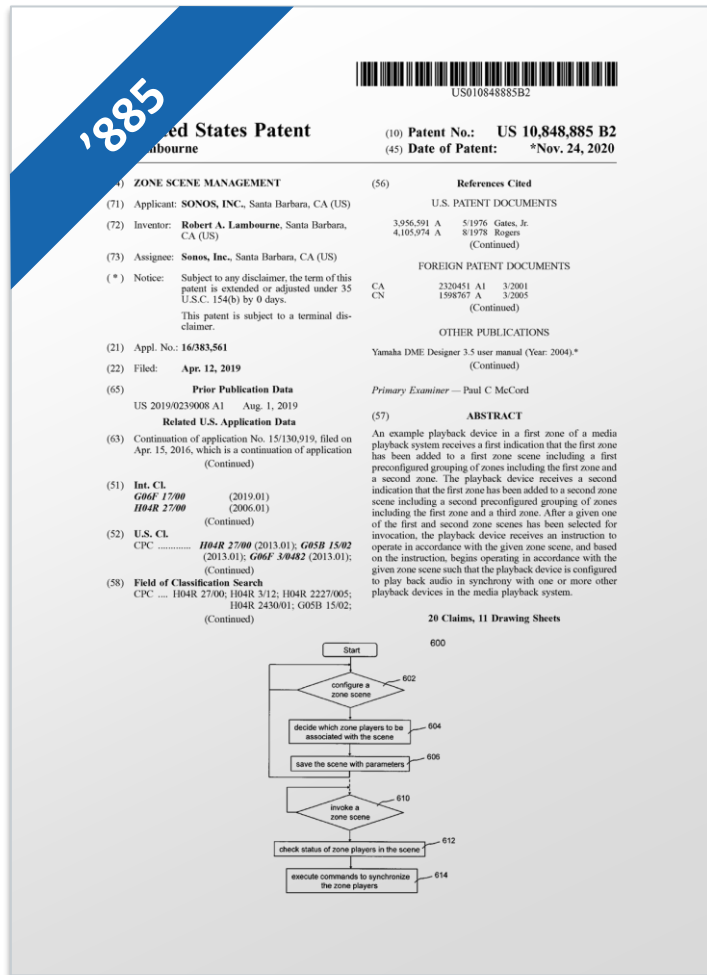
'885 Patent: "Zone Scene"

| Google Construction | Sonos Construction |
|---|--|
| "a previously saved grouping of zone players according to a common theme" | "a previously-saved grouping of zone players that are to be configured for synchronous playback of media when the zone scene is invoked" |

Dispute

Whether a "scene" is merely a group

The '885 Patent – Claim 1



1. A first zone player comprising:
 a network interface that is configured to communicatively couple the first zone player to at least one data network;
 one or more processors;
 a non-transitory computer-readable medium; and
 program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

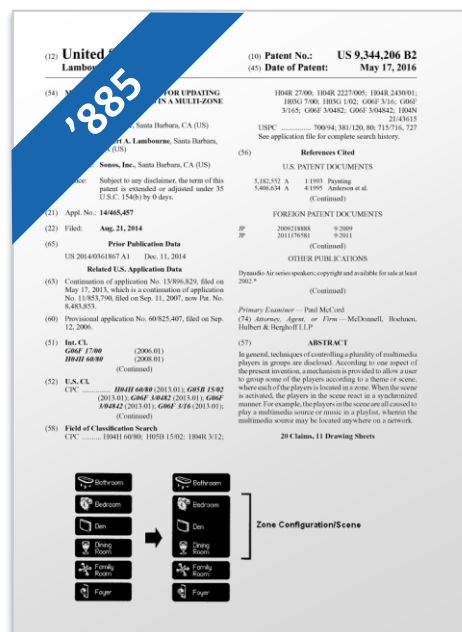
- (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first **zone scene** comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first **zone scene** is invoked; and
- (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second **zone scene** comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second **zone scene** is invoked, wherein the second zone player is different than the third zone player;

after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second **zone scenes** has been selected for invocation;

after the given one of the first and second **zone scenes** has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second **zone scenes** respectively comprising a given one of the first and second predefined groupings of zone players; and

based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

'885 Patent: "Zone" Is Defined in the Specification



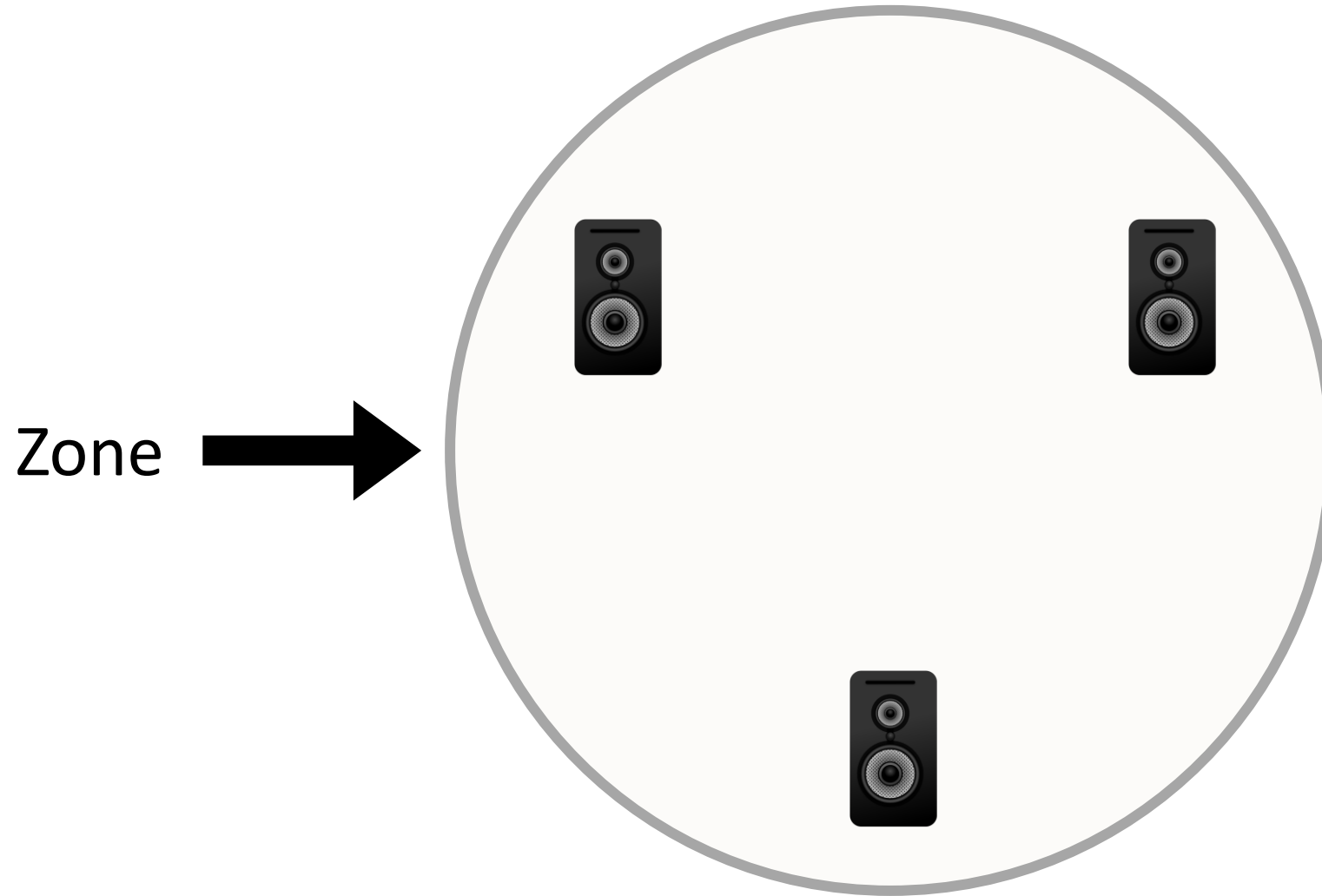
building or a complex with multiple zones. There are a number of multimedia players of which three examples 102, 104 and 106 are shown as audio devices. Each of the audio devices may be installed or provided in one particular area or zone and hence referred to as a zone player herein.

'885 Patent at 4:44-48

according to a theme or scene, where each of the players is located in a zone. When the scene is activated, the players in

'885 Patent, 2:4-41

Illustration of "Zone"



Both Parties Agree That “Zone Scene” Is a Coined Term

Case 6:20-cv-00881-ADA Document 66 Filed 06/15/21 Page 1 of 22

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

| | | |
|--------------|---|---------------------|
| Sonos, Inc., | § | |
| | § | |
| Plaintiff, | § | No. 6:20-cv-881-ADA |
| v. | § | |
| | § | |
| Google LLC, | § | |
| | § | |
| Defendant. | § | |

PLAINTIFF SONOS, INC.

“the parties agree that ‘zone scene’ is a coined term.”

W.D. Tex. Sonos Reply Claim Constr. Br. at 7

Coined Terms Must Be Construed According to the Specification



“Both parties agree that the term *NSP* is a *coined term*, without a meaning apart from the patent. As construed, all the asserted claims involve communicating with the ASP through a connection established by the NSP. *We therefore look to the specification to determine what the NSP must do* when establishing that communication link.”

MyMail, Ltd. v. America Online, Inc., 476 F.3d 1372, 1376 (Fed. Cir. 2007)



Where parties agreed that the term “marker substance” has no accepted meaning, “*we construe [the term] only as broadly as is provided by the patent itself.*”

Goldenberg v. Cytogen, Inc., 373 F.3d 1158, 1164 (Fed. Cir. 2004)



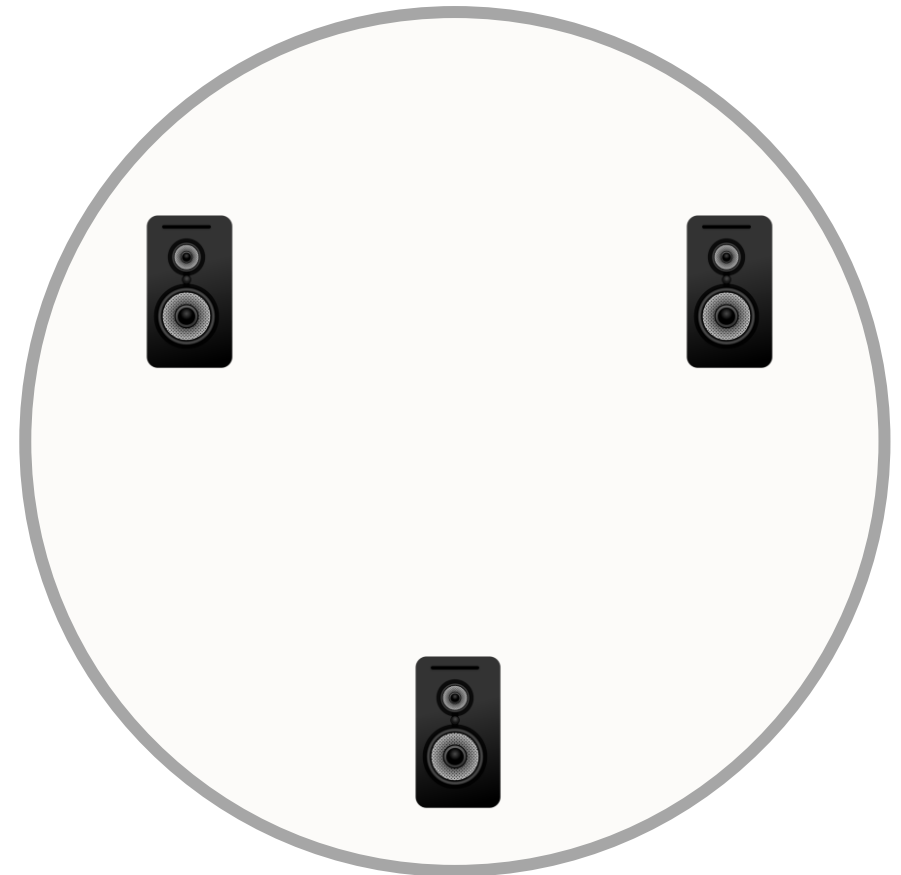
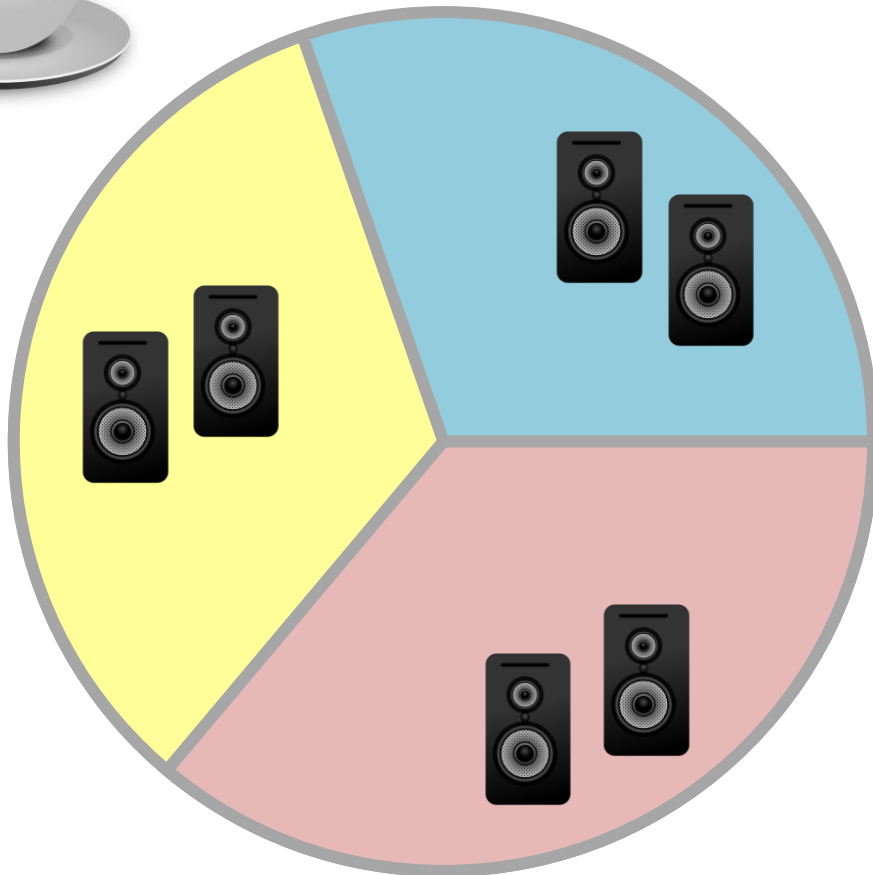
“Idiosyncratic language, highly technical terms, or terms coined by the inventor are best understood by reference to the specification.”

Intervet, Inc. v. Merial Ltd., 617 F.3d 1282, 1287 (Fed. Cir. 2010)

Absent a Common Theme, a “zone scene” Is Just a “zone”



Morning

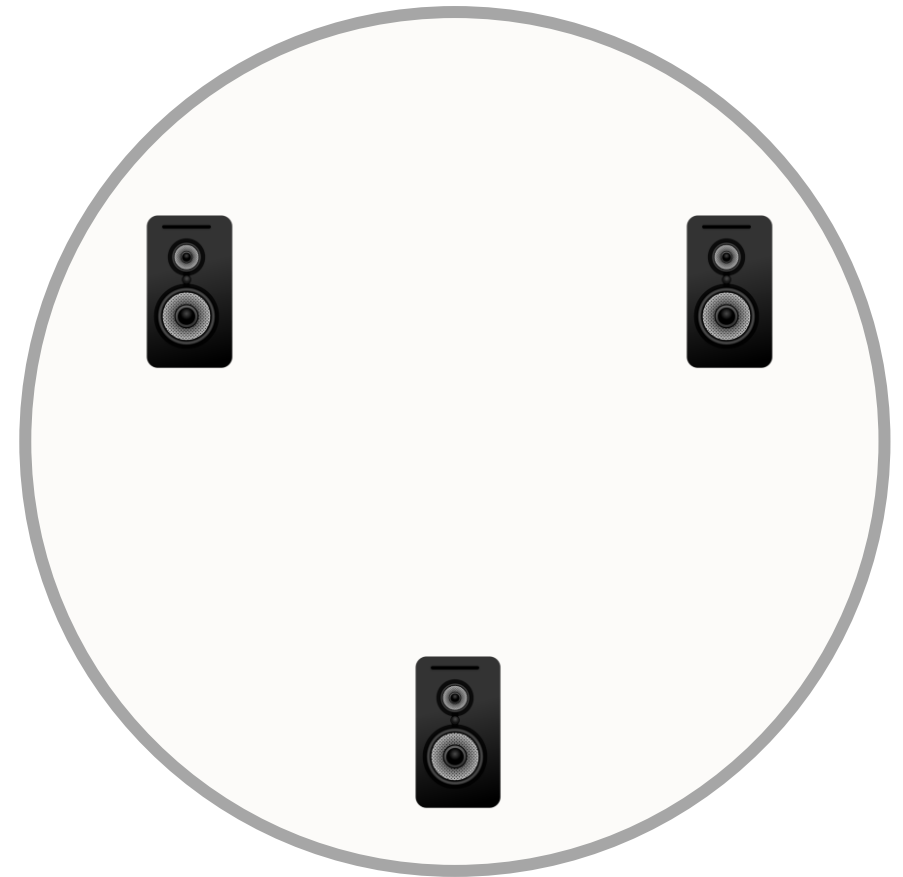


Sonos's Construction of "Zone Scene" Is the Same as "Zone"

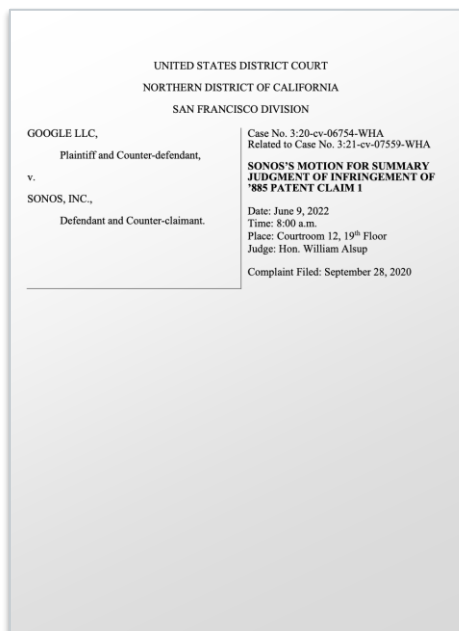
**Absent a common theme limitation,
a "Zone Scene" is no different than simply a "Zone."**

19 party's position. Sonos proposes a construction that tracks the definition of "zone scene" set forth
20 by the claim language, namely, "a previously-saved grouping of zone players that are to be
21 configured for synchronous playback of media when the zone scene is invoked." See D.I. 126,
22 App. A at 27. Google is advocating for the construction "a previously saved grouping of zone
23 players according to a common theme." *Id.*

Sonos Mot. at 8

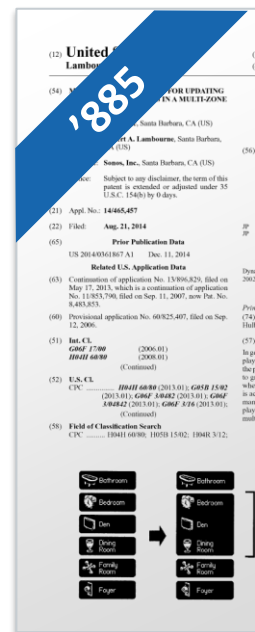


Sonos's Proposal Reads Out "Scene" – the Heart of the Invention

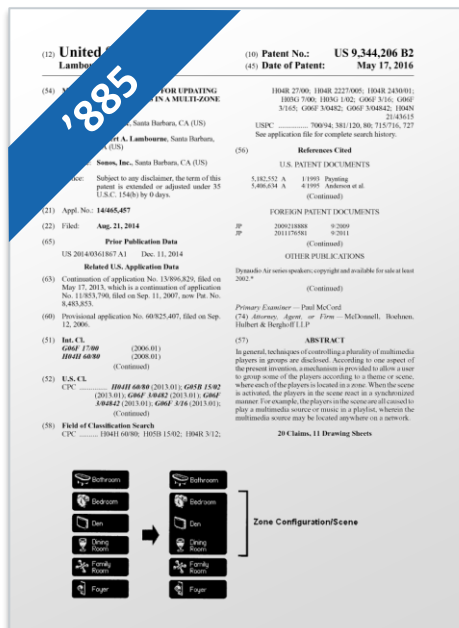


19 party's position. Sonos proposes a construction that tracks the definition of "zone scene" set forth
20 by the claim language, namely, "a previously-saved grouping of zone players that are to be
21 configured for synchronous playback of media when the zone scene is invoked." See D.I. 126,
22 App. A at 27. Google is advocating for the construction "a previously saved grouping of zone
23 players according to a common theme." *Id.*

Sonos Mot. at 8



Sonos's Proposal Fails To Construe "Scene" – the Heart of the Invention



In general, the present invention pertains to controlling a plurality of multimedia players, or simply players, in groups. According to one aspect of the present invention, a mechanism is provided to allow a user to **group some of the players according to a theme or scene**, where each of the players is located in a zone. When the scene is activated, the players in the scene react in a synchronized manner. For example, the players in the scene are all caused to play an audio source or music in a playlist, wherein the audio source may be located anywhere on a network.

'885 Patent at 2:36-45

The present invention may be implemented in many forms including software, hardware or a combination of both. According to one embodiment, the present invention is directed to a method for groupings in a multi-zone media system, the method comprises providing a mechanism to allow a user to determine which players in the system to be associated with a theme representing a group; and configuring the theme with parameters pertaining to the players, wherein the theme is activated at anytime or a specific time so that the players react in a synchronized manner. The players in a scene are synchronized to play a multimedia file when the scene is activated.

'885 Patent at 3:1-12

One of the features, benefits and advantages in the present invention is to allow sets of related devices (controllers and operating components) to exist as a group without interfering with other components that are potentially visible on the same wired or wireless network. **Each of the sets is configured to a theme or a scene.**

'885 Patent at 11:6-11

Sonos's Construction is Improper Because it Reads Out Limitations



In construing claims, however, we must give each claim term the respect that it is due.

Pause Technology, LLC v. TiVo, Inc., 419 F.3d 1326, 1334 (Fed. Cir. 2005)



A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.

Merck & Co., Inc. v. Teva Pharm. USA, Inc., 395 F.3d 1364, 1372 (Fed. Cir. 2005)

Sonos's Construction Adds in "synchronous" to "zone scenes"



1. A multimedia controller including a processor, the controller configured to:

receive, via a network interface, a zone configuration from a first independent playback device of a plurality of independent playback devices, wherein the zone configuration is configured via the controller and maintained at the first independent playback device, and wherein the zone configuration characterizes one or more **zone scenes**, each **zone scene** identifying a group configuration associated with two or more of the plurality of independent playback devices; and

cause a selectable indication of the received zone configuration to be displayed, wherein the displayed selectable indication is selectable to cause one or more of the **zone scenes** to be invoked by two or more of the plurality of independent playback devices.

'206 Patent Cl. 1



1. A computing device comprising: . . .

receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for **synchronous playback of media when the first zone scene is invoked**;

. . .

receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be **configured for synchronous playback of media when the second zone scene is invoked**, wherein the third zone player is different than the second zone player;

. . .

based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the second zone player to **output media in synchrony** with output of media by at least the second zone player.

'966 Patent Cl. 1

Sonos's Construction Reads In Limitations Rendering the Claims Superfluous



Any other conclusion renders the reference to 30° superfluous.

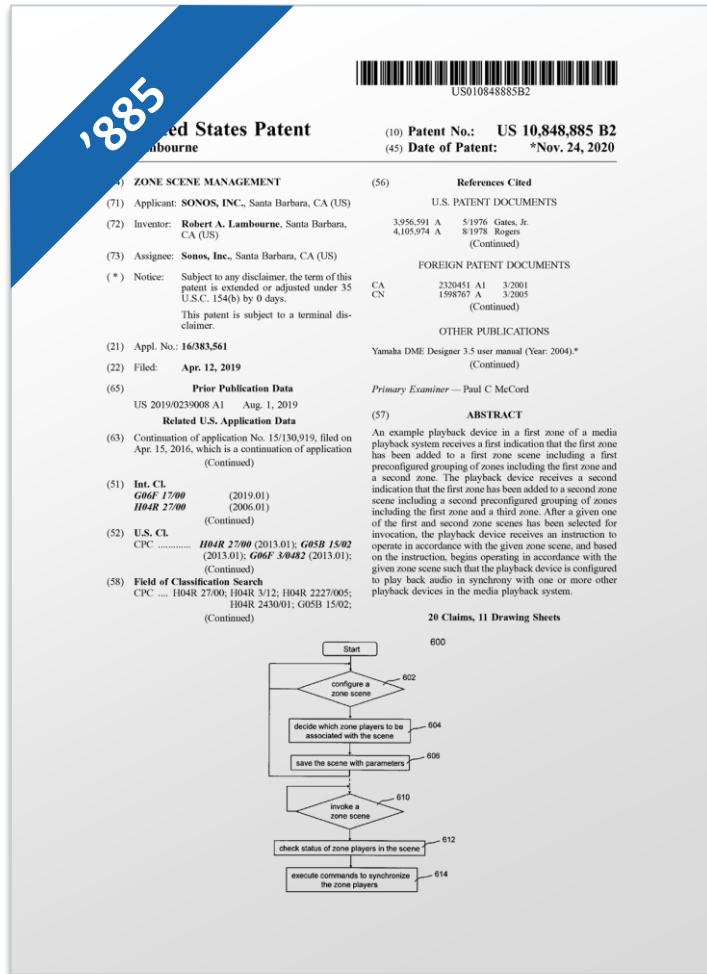
Elekta Instrument S.A. v. O.U.R. Sci. Int'l, Inc., 214 F.3d 1302, 1307 (Fed. Cir. 2000)



If we were to read the “even when perfectly formed” requirement into the graphical separation limitation for all claims, we would effectively be rendering claims 9 and 11 **superfluous**. This we will not do.

Xerox Corp. v. 3Com Corp., 267 F.3d 1361, 1366, 60 U.S.P.Q.2d 1526 (Fed. Cir. 2001)

A “Zone Scene” Is a “Theme”—Not Just a Group



together using one command. Using what is referred to herein as a theme or a zone scene, zones can be configured in a particular scene (e.g., morning, afternoon, or garden), where a predefined zone grouping and setting of attributes for the grouping are automatically effectuated.

'885 Patent at 8:47-51

The Theme Has Particular Attributes

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'885 Patent at 8:47-51

if invoked. The command is in a form of a zone scene. After linking the appropriate zones, a zone scene command could apply the following attributes:

Set volumes levels in each zones (each zone can have a different volume)

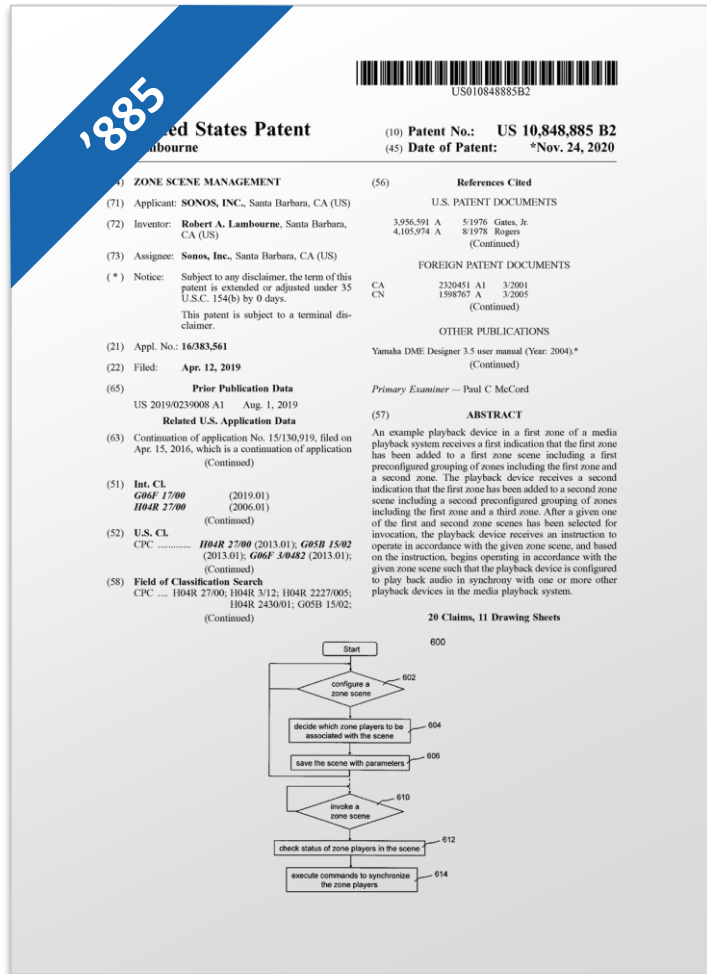
Mute/Unmute zones.

Select and play specific music in the zones.

Set the play mode of the music (Shuffle, Repeat, Shuffle-repeat)

Set the music playback equalization of each zone (e.g., bass treble).

'885 Patent at 9:20-30



The Theme Has Particular Attributes

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'885 Patent at 8:47-51

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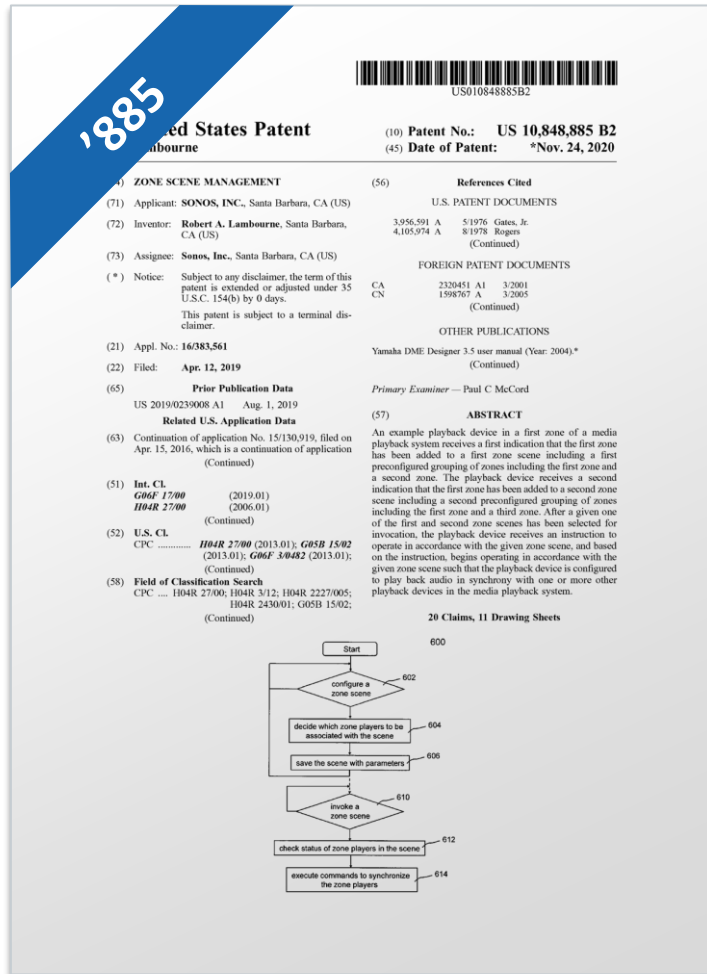
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'885 Patent at 9:20-30



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'885 Patent at 8:47-51

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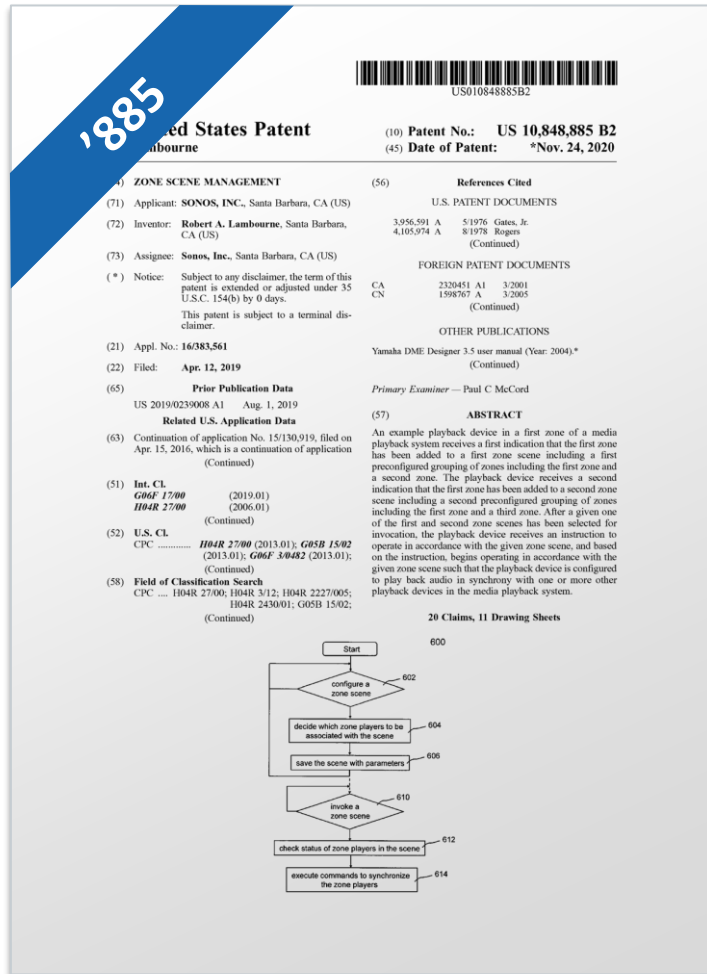
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'885 Patent at 8:47-51

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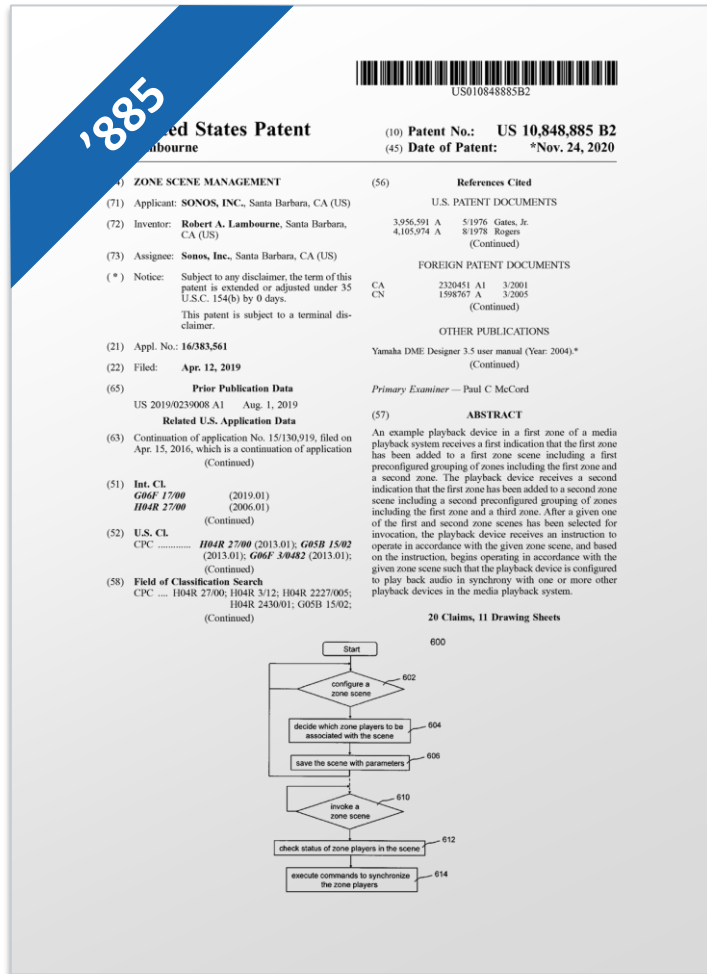
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'885 Patent at 9:20-30



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'885 Patent at 8:47-51

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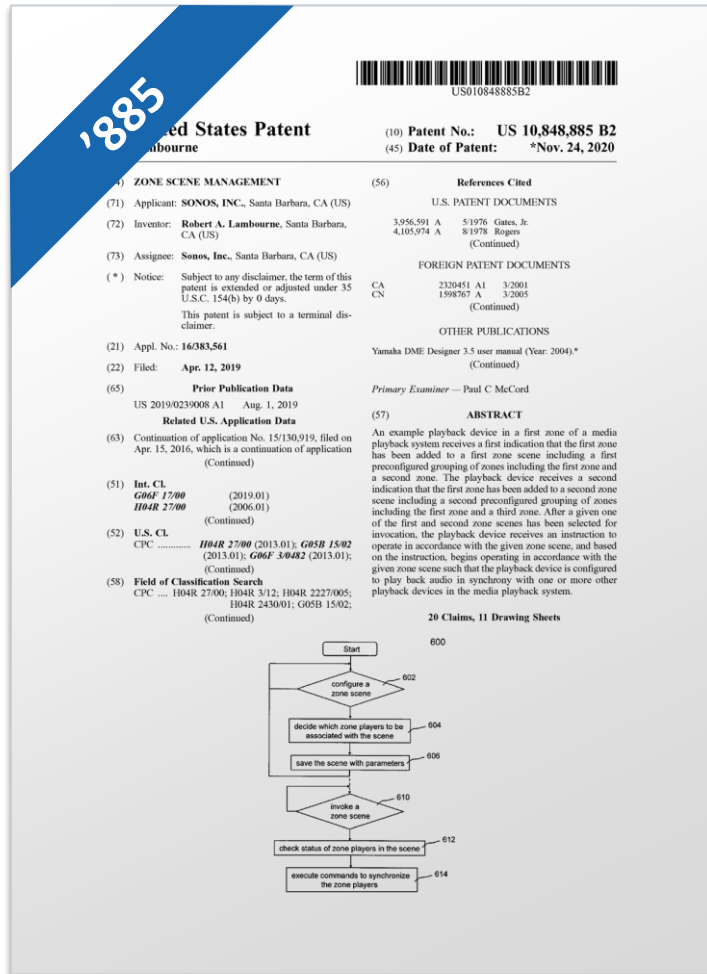
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'885 Patent at 9:20-30



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'885 Patent at 8:47-51

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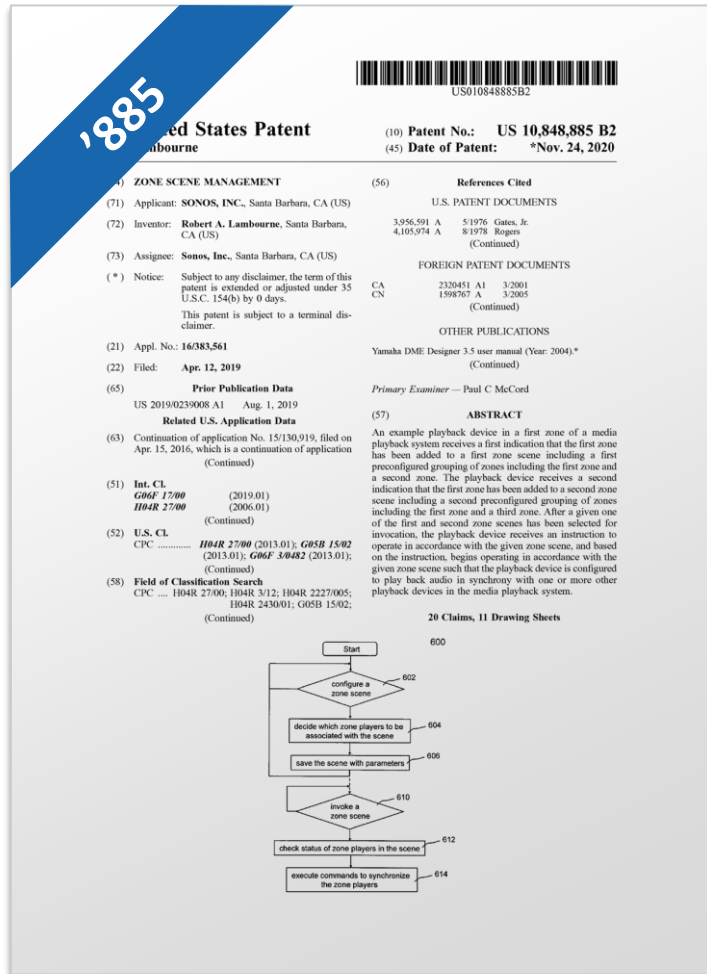
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Select and play specific music in the zones.

Set the play mode of the music (Shuffle, Repeat, Shuffle-repeat)

Set the music playback equalization of each zone (e.g., bass treble).

'885 Patent at 9:20-30



Sonos Reads Out the “Common Theme” Requirement

Sonos contends: “*every ‘speaker group’ that a user creates in a Cast-enabled playback system has some common theme*, which in this context amounts to whatever common topic, subject, etc. led the user to decide that these particular Cast-enabled media players should be placed into a previously-saved group that allows for synchronous playback when invoked.”

Sonos Infr. Contentions Ex. D (Dkt. 175-28) at 6.

Rebuttal: If every speaker group “has some common theme,” then “common theme” is meaningless.

Infringement Cannot be Based on a User's Subjective State of Mind When Naming a Zone

Case 3:20-cv-00734-WJA Document 3-1 Filed 08/18/22 Page 19 of 21

Sonos contends: “every ‘speaker group’ that a user creates in a Cast-enabled playback system has some common theme, which in this context amounts to ***whatever common topic, subject, etc. led the user to decide*** that these particular Cast-enabled media players should be placed into a previously-saved group that allows for synchronous playback when invoked.”

Sonos Infr. Contentions Ex. D (Dkt. 175-28) at 6.

Rebuttal: There can be no infringement based on a user's **subjective state of mind**



We are not prepared to assign a meaning to a patent claim that depends on the state of mind of the accused infringer. We thus reject Amazon's special meaning

Amazon.com, Inc. v. Barnesandnoble.com, Inc., 239 F.3d 1343, 1353 (Fed. Cir. 2001)

“Zone Scene” Must be More Than a Group Because the Claims Already Require Grouping



It is highly disfavored to construe terms in a way that renders them void, meaningless, or superfluous.

Wasica Fin. GmbH v. Cont'l Auto. Sys., Inc., 853 F.3d 1272, 1288 (Fed. Cir. 2017)

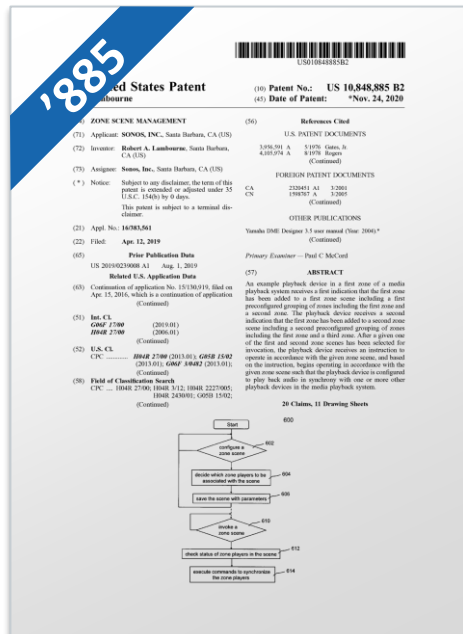
- (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

'885 Patent, Claim 1 (excerpted)

A (prior art) Group Name Cannot Be a “Zone Scene”

Sonos argues: The accused Google Home app allows “the user to input a name for the ‘speaker group,’” this “serves as the user’s shorthand label of the common theme.”

Response: The admitted prior art in the specification (i.e., “traditional systems”) disclosed names like “morning,” “evening,” and “weekend.”



the broadcast news. In the evening, the audio players in the den and the living room are grouped for the music. Over the weekend, the audio players in the den, the living room, and a kitchen are grouped for party music. Because the morning group, the evening group and the weekend group contain the den, it can be difficult for the traditional system to accommodate the requirement of dynamically managing the ad hoc creation and deletion of groups.

'885 Patent at 2:9-16

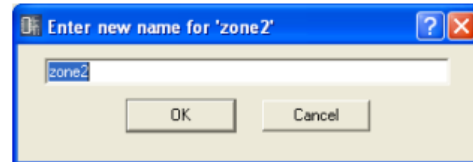
Examples of Speaker Group Naming in the Prior Art

[Rename] Button

Changes the name of the zone selected on the list. Clicking here displays the "Enter new name for the current zone name" dialog box. Enter a zone name, then click the [OK] button.

NOTE

The current name of the zone you will be renaming is displayed in the "Current Zone Name" box of the "Enter new name for current zone name" message.

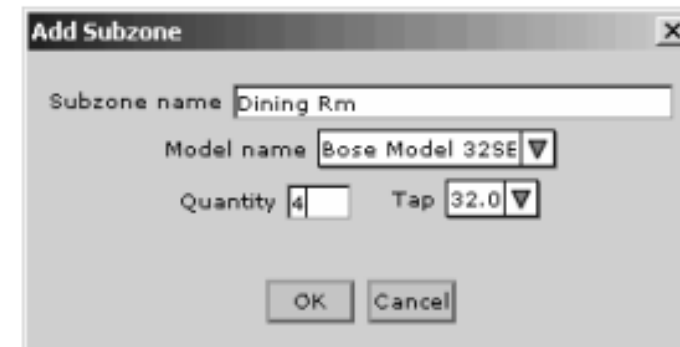


Dkt. 249-2 at 5 (2004 Yamaha DME 3.5 Manual)

To add a subzone

Click the **Add** button. When the Add Subzone window appears, enter a name for the new subzone, select the speaker model installed, enter the quantity, and select a tap setting. The Model Name list will include only speakers that are compatible with the Speaker EQ you selected.

Click **OK** to add the selections to the subzone table.

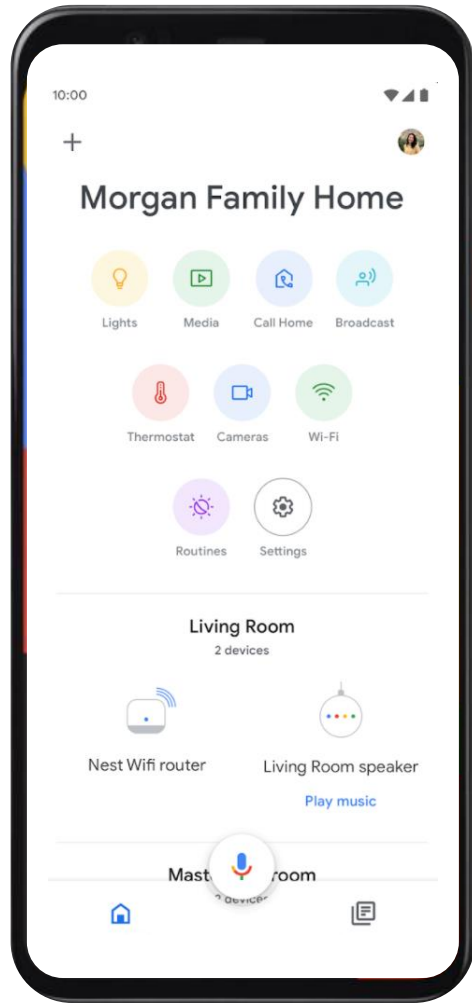


Dkt. 249-3 at 5 (2004 Bose Freespace Manual)

Sonos Argues That a Group Name Is a “Zone Scene”



A Name Is Not a “Scene” or a “Theme” Because It Can be Called Anything



A Name is Not a Scene Because It Lacks Any Attributes

together using one command. Using what is referred to herein as a theme or a zone scene, zones can be configured in a particular scene (e.g., morning, afternoon, or garden), where a predefined zone grouping and setting of attributes for the grouping are automatically effectuated.

'885 Patent at 8:47-51

if invoked. The command is in a form of a zone scene. After linking the appropriate zones, a zone scene command could apply the following attributes:

Set volumes levels in each zones (each zone can have a different volume)

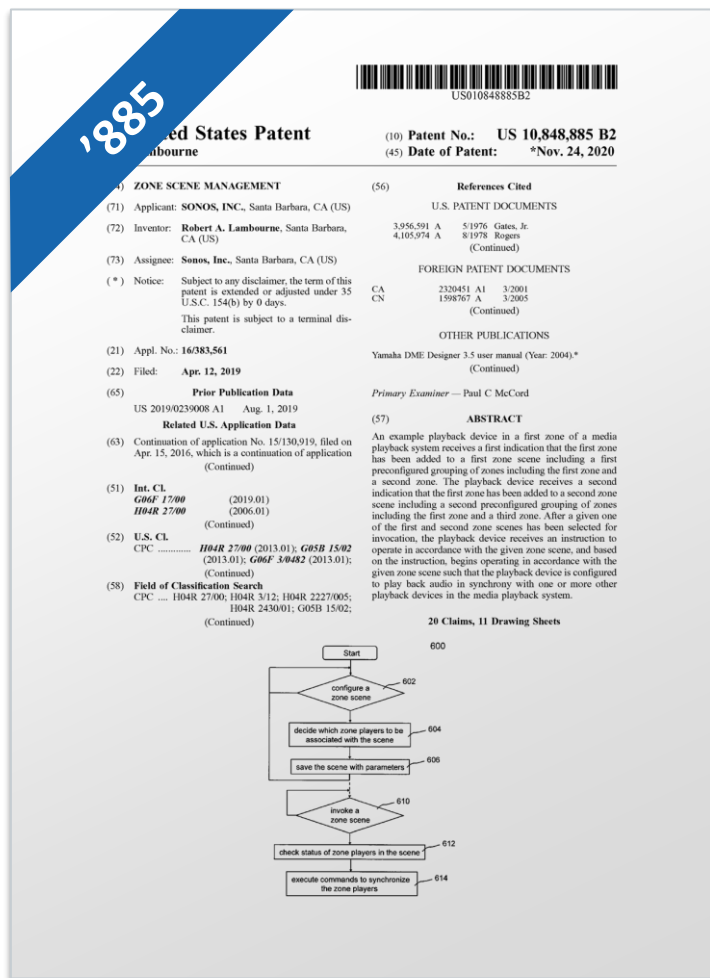
Mute/Unmute zones.

Select and play specific music in the zones.

Set the play mode of the music (Shuffle, Repeat, Shuffle-repeat)

Set the music playback equalization of each zone (e.g., bass treble).

'885 Patent at 9:20-30



- **“Zone scene” has already been construed and requires a “common theme”**
- **Saving a group or naming it does not transform a group into a “zone scene”**
- **Google implements plain speaker grouping without scenes**
 - Sonos has not argued that Google implements scenes through volume, music, equalization, or play mode

**The Accused Products Do Not Receive an Indication
That the “Zone Player Has Been Added to” a Zone Scene**

Relevant Claim Language

1885

United States Patent
Lambourne

(10) Patent No.: **US 10,848,885 B2**
(45) Date of Patent: ***Nov. 24, 2020**

(71) Applicant: **SONOS, INC.**, Santa Barbara, CA (US)
(72) Inventor: **Robert A. Lambourne**, Santa Barbara, CA (US)
(73) Assignee: **Sonos, Inc.**, Santa Barbara, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.
This patent is subject to a terminal disclaimer.

(21) Appl. No.: **16/383,561**
(22) Filed: **Apr. 12, 2019**
(65) Prior Publication Data
US 2019/0239008 A1 Aug. 1, 2019

Related U.S. Application Data
(63) Continuation of application No. 15/130,919, filed on Apr. 15, 2016, which is a continuation of application (Continued)

(51) Int. Cl. **G06F 17/00** (2019.01)
H04R 27/00 (2006.01)
(52) U.S. Cl. **H04R 27/00** (2013.01); **G05B 15/02** (2013.01); **G06F 3/0482** (2013.01);
(58) Field of Classification Search
CPC: H04R 27/00; H04R 3/12; H04R 2227/005; H04R 2430/01; G05B 15/02;
(Continued)

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(Continued)
FOREIGN PATENT DOCUMENTS
CA 2320451 A1 3/2001
CN 1598767 A 3/2005
(Continued)
OTHER PUBLICATIONS
Yamaha DME Designer 3.5 user manual (Year: 2004)*
(Continued)
Primary Examiner — Paul C. McCord

(57) ABSTRACT
An example playback device in a first zone of a media playback system receives a first indication that the first zone has been added to a first zone scene including a first predefined grouping of zones including the first zone and a second zone. The playback device receives a second indication that the first zone has been added to a second zone scene including a second predefined grouping of zones including the first zone and a third zone. After a given one of the first and second zone scenes has been selected for invocation, the playback device receives an instruction to operate in accordance with the given zone scene, and based on the instruction, begins operating in accordance with the given zone scene such that the playback device is configured to play back audio in synchrony with one or more other playback devices in the media playback system.

20 Claims, 11 Drawing Sheets

```

graph TD
    600([Start]) --> 602[configure a zone scene]
    602 --> 604[decide which zone players to be associated with the scene]
    604 --> 606[save the scene with parameters]
    606 --> 610{invoke a zone scene}
    610 --> 612[check status of zone players in the scene]
    612 --> 614[execute commands to synchronize the zone players]
  
```

1. A first zone player comprising:
a network interface that is configured to communicatively couple the first zone player to at least one data network;
one or more processors;
a non-transitory computer-readable medium; and
program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

(i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

(ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

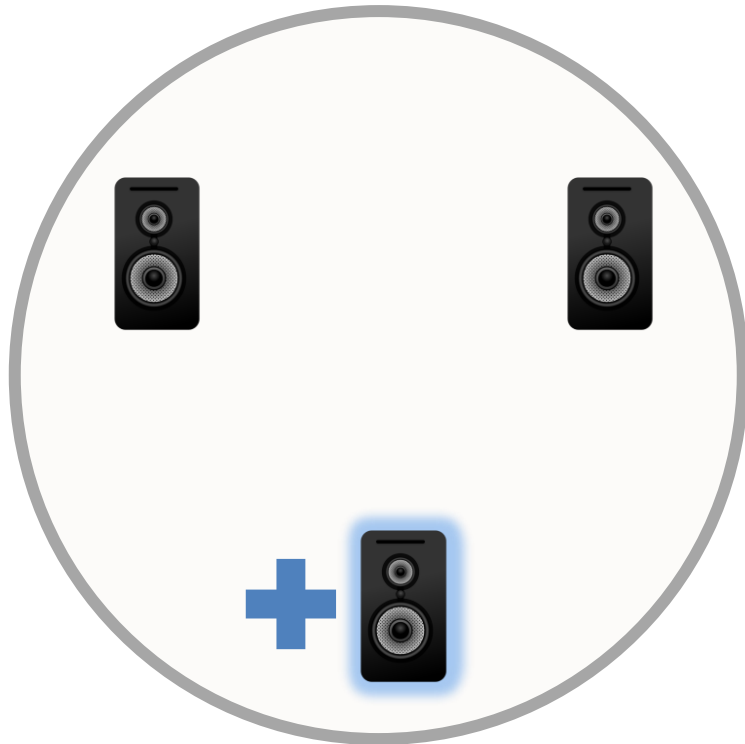
after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

“Indication That the First Zone Player Has Been Added to a First Zone Scene”

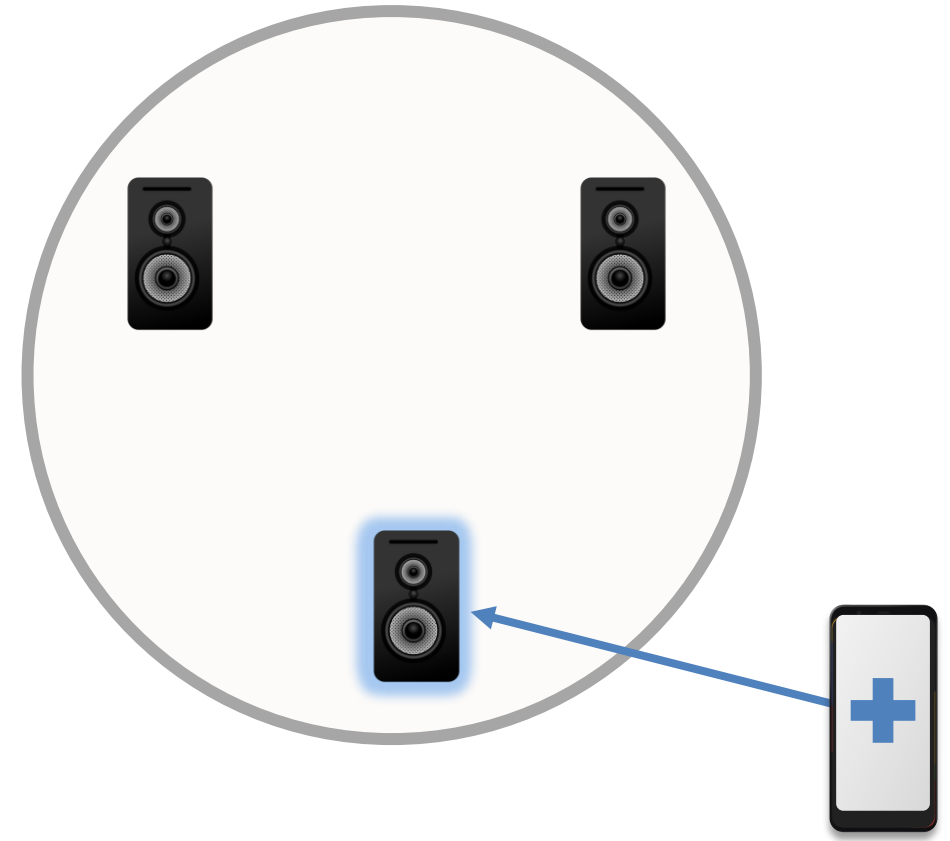
Step 1:

Zone Player added to the group



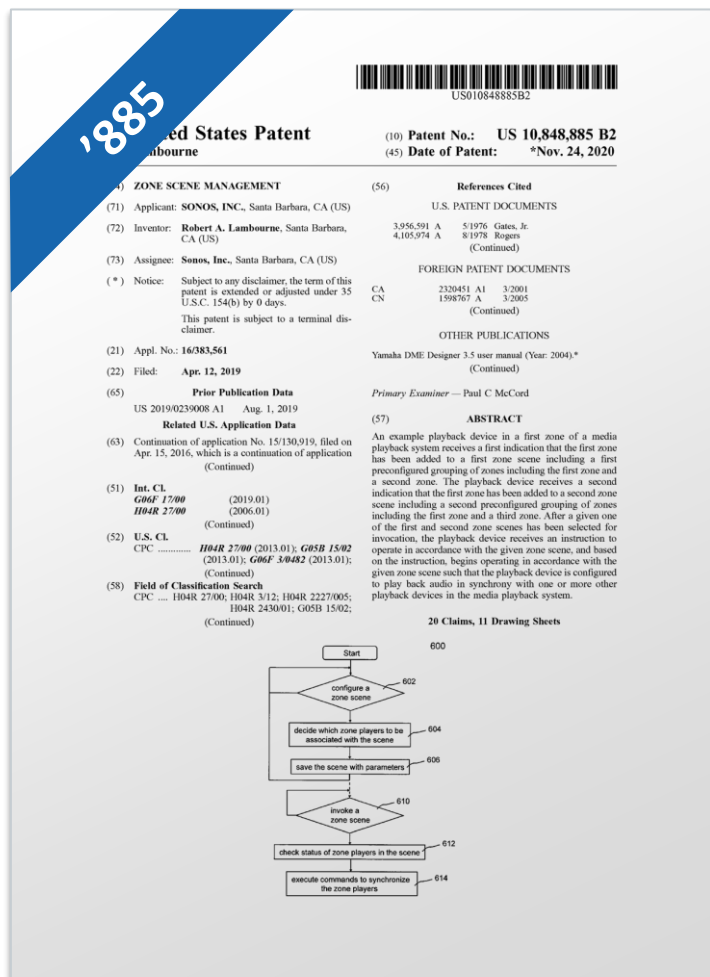
Step 2:

Zone Player is notified by the controller that it has been added to the group



**The Accused Products Do Not Receive An Indication
“including at least the first zone player and a second zone player”**

The Claimed Indication Must Include the Members of the Group



1. A first zone player comprising:
a network interface that is configured to communicatively couple the first zone player to at least one data network;
one or more processors;
a non-transitory computer-readable medium; and
program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

(i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

(ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

